JUNE 1959

National SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION

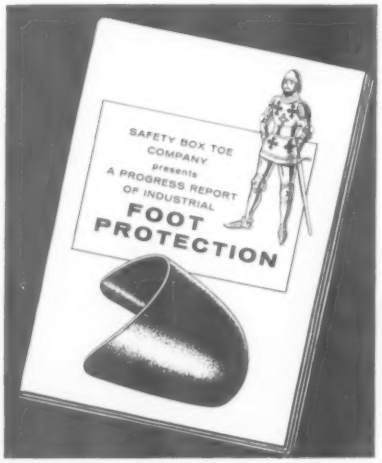
THE BIG SQUEEZE IS ON!

No doubt about it . . . you wouldn't let such a character loose in your plant for all the tea in China. But stop and think a moment and you will realize he is just as well off *barefoot* as he would be wearing *regular* shoes. He would still be a dead pigeon! Leather alone offers no protection when THE BIG SQUEEZE IS ON.

REMEMBER . . . It's the *steel toe* that makes a shoe safe. You can always rely on the new improved WINGUARD steel toes to give your workers the maximum protection and comfort in their safety shoes.

There is a specific safety shoe designed for every industrial purpose and your safety shoe supplier will be glad to help you make the right selection for your worker's needs.

Write today for your illustrated copy of
A PROGRESS REPORT OF INDUSTRIAL FOOT PROTECTION



Safety Box Toe Company

812 STATLER BUILDING · BOSTON

Circle Item No. IFC—Reader Service Card

NOT ONLY A SHOE FOR EVERY JOB...

H510... A top choice, featuring long-wearing, anti-slip Resist-Oil Cel-Lite Grit sole and heel developed in our own plant.

. . . A SOLE FOR *Every Work Condition*

Termed "the largest ever in *any* shoe line", Hy-Test's selection of soles assures workers safe and sound footing under 'most any work condition. Shown here are the labels of the soles we use . . . many developed and produced by International Shoe Company, others purchased from leading sole manufacturers. To solve the sole problem in your plant, go HY-TEST . . . and *select* the soles to meet your requirements.

HY-TEST SAFEty SHOES

Division INTERNATIONAL SHOE COMPANY

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Teletype: SL300

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HY-TEST

SAFEty SHOES *(and Soles)* FOR EVERY NEED

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National SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION

Vol. 79, No. 6 JUNE 1959

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NATIONAL SAFETY COUNCIL

Chartered by the Congress of the United States

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THE COVER

Primitive man discovered that rope was a valuable aid in hauling and hoisting and keeping him from falling. Today, rope of natural and synthetic fibers is still carrying a large share of the load on routine jobs and in dramatic situations. (Photo by Plymouth Cordage Company)

37,300 copies of this issue were printed

They never had it so soft!

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CHEVRONS SOLE

Double V
Double Safe

GLOVE LEATHER UPPERS-SOFT, SPRINGY BOTTOMS give your employees the easy feel of leisure shoes with all the foot-protection they need on the job. The Cush-N-Crepe sole is resistant to oil and grease. The popular sawtooth sole is redesigned for safety — *won't creep.* They'll help prevent off-the-job injuries, too. DISPLAY THEM. They're the shoes men want for now.

Stock No. 1341

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Lehigh
SAFETY SHOE COMPANY
Emmaus, Pa.

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New from Wright!

Built-In Overload Protection for Operator, Load and Hoist with the New Wright Overload Cutoff*!

Now, for the first time on any electric hoist, you can have safe, sure mechanical overload protection as a built-in feature with the **WRIGHT Overload Cutoff.** Designed and built to fit any new WRIGHT *Speedway* Electric Hoist, the Overload Cutoff unit you see pictured above is a compact, integral part of the hoist frame itself. As a result, it becomes a functional part of the hoist *at no sacrifice in headroom.* The WRIGHT Overload Cutoff is so simple in design and operation that it is guaranteed to give dependable, trouble-free protection during the entire life of the hoist. Calibrated and sealed at the factory for the user's protection, the unit takes rugged abuse up to the critical point of overload—then instantaneously "breaks" the raising circuit of the hoist. This allows the load to be safely lowered to the floor and unhooked. Once this is done, the raising circuit of the hoist is again automatically restored.

The WRIGHT Overload Cutoff is available now as standard equipment on all new WRIGHT Frame 2 & 3 *Speedway* Electric Hoists, and as optional equipment on new Frame 1 & 1½ models.

Find out how WRIGHT *Speedway* Hoists equipped with Overload Cutoff can bring practical, fast-acting overload protection to your material handling operations. For complete information, write our York, Pa., office.

*Patent applied for

WRIGHT HOISTS

Wright Hoist Division • American Chain & Cable Company, Inc.

York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

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A Way of Living and Thinking

SAFETY is not something different from the rest of life; in its very sameness is its greatest strength. Safety is like a muscle. Unless it is attached to something, it draws up in a knot and withers away. The more things it is attached to, the more useful it can be.

In 22 years of dealing with it, I have seen safety banish long-standing alienation between father and son. I have seen it soften a belligerent pink-tinged union executive board and convince the employees that the boss was a human being.

I have seen it set the lackadaisical afire with a sense of urgent mission. I have seen it change the frame of mind of entire cities, setting the officials and the people to working together instead of at cross purposes.

And, of course, I have seen it save lives, increase profits, and pay off a thousand-to-one and better for every dollar invested.

But these things it did not in and of itself, but through what people did with it.

And I would emphasize that these people were not safety "experts." There are no experts in safety. Effective safety work depends not on extensive education or highly specialized technical knowledge, but on ordinary, everyday people with open and alert minds and reasonably well-developed consciences.

There are safety specialists—people who work at it full time, who can provide to people of alert mind and good will information they can use in preventing accidents.

But neither an expert nor a specialist can prevent an accident in your company, in your town. This can be done only by people—you and yours. Nobody can really prevent an accident except the person who is likely to suffer it or cause it.

Safety is not a commodity; it is a condition. In its successful forms it is not something to be; it is something to do. It is not static; it is dynamic.

It is not something separate, to be turned on or off like a faucet, but a small, important part of everything . . . a way of living and thinking.

DON HILL, *District Director*
National Safety Council

THE SAFETY VALVE

Nothing human is alien to me

—TERENCE

WHICH?

LEO P. BOTT, a Chicago ad man, wishes people would make up their minds whether to use *flammable* or *inflammable*. Somebody wrote him:

"Would somebody please explain 'flammable' and 'inflammable?' "

Mr. Bott turned to his dictionary and found:

Inflammable—capable of being easily set on fire.

Flammable—capable of being easily ignited; preferred to inflammable for technical use because of possible ambiguity of the *in*-prefix.

Gasoline trucks use either word, says Mr. Bott, who feels that this dual use is dangerous.

"Let's adopt one or the other and educate the public accordingly. Publications, help!" pleads Mr. Bott.

Well, the NEWS has been doing its part to popularize the shorter form. More than 30 years ago, the NFPA, NBFU, NSC, and other organizations agreed that flammable was the better word and have used it exclusively in their publications. Finally, the dictionaries came around to our point of view. And the oil companies, after studying possible legal angles, came into line.

As for the possible menace, we don't think the public is likely to be misled by inscriptions on tank trucks. If the stuff in them is harmless why should the company paint them red and inscribe (in)flammable on them in large letters?

Incidentally, these trucks will probably do more to educate the public than we editors could.

* * *

Could it be that one reason why the Ten Commandments are so short and to the point is that they were given direct and did not come out of a committee?—The Pick-Up.

* * *

MORE ABOUT MOWERS

WHEN MR. B. C. KRAUTER, a landscape engineer down east in Maine, attempted to take the hide off "Uncle Harry" Johnson for a piece called "The Saber-Toothed Power Mower" (Off the Job page for April), he dared us to print his letter. It gave a nice change of pace to last month's *Safety Valve*.

Knowing our readers, I felt sure Mr. Krauter's remarks would draw fire. Here's the first letter received. It's from Ed Rahde, general chairman of the Council's Automotive and Machine Shop Section:

"In reading Krauter's letter, I was about convinced that he was joking, but apparently he is serious.

"He sure must be a fine, fine Christian because someone above is keeping him alive in spite of his own best efforts at self-extermination.

"Wow!"

I too was wondering whether Mr. Krauter was writing with tongue in cheek. But a lot of folks do think we safety people are a lot of old women peddling unrealistic advice.

Unfortunately, Mr. Krauter isn't the only one in his family who is exposed to the whirling blade. He nonchalantly mentioned his twelve-year-old boy mowing the lawn in bathing trunks and sneakers.

In this claims-minded age I wouldn't hire my best friend's boy to use a power mower on my lawn. Sure, I carry liability insurance, but you couldn't be sure that would satisfy a claim these days.

We might as well realize that the power mower, like the automobile, is here to stay, and everybody with 500 square feet of lawn owns or wants one. And mechanically-minded youngsters are going to operate them.

What to do? First of all, make sure the operator is not of too tender years, has a wholesome respect for the machine, and knows how to handle it. Pop should make sure the mower is in good condition and that the lawn has been raked for potential missiles.

We might add safety shoes, but aren't too optimistic about their use. But the kid's feet should at least be in substantial shoes.

THEY'LL STILL BE CARS

IF YOU'RE SHOPPING for a car in 1980, you'll be able to recognize those in the showrooms as lineal descendents of today's models, an anonymous research engineer has told the Automobile Manufacturers Association.

Don't look for such developments as gas turbines, steam, battery-electric, fuel cell, solar electric, and nuclear power plants by 1980, he warns us.

Revolutionary changes are not likely to involve external appearances, but there will be continued improvements in controls. These will further reduce the work of a driver's hands, feet, and eyes and leave him free of make sound decisions.

Also coming up are more psychological and physiological studies of the interrelations of driver and vehicle.

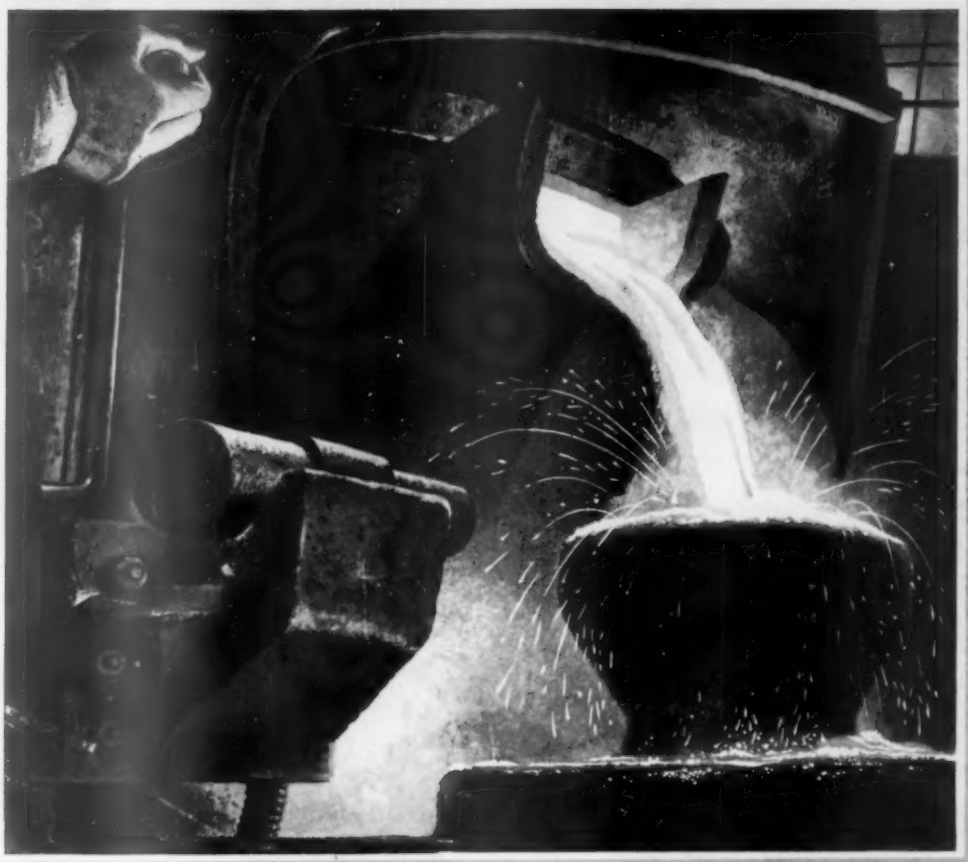
Among the possibilities of innovations to minimize the possibility of driver error are: a single control for steering, accelerating, and braking; automatic vehicle guidance and speed control.

The 1980 models will still have wheels and tires and probably spark-ignition engines.

The automotive prophet didn't mention any possible solutions for parking problems nor the trend of costs for cars, fuel, taxes, and insurance.

But you don't need a crystal ball to tell which direction they're heading.

Carman Fish



Melting furnace at Calumet & Hecla, Inc.—Wolverine Division, where Shell Irus Fluid 902 eliminates the danger of hydraulic line fires.

Ready... aim... NO FIRE!

Take 10 high-temperature alloy-melting furnaces, hydraulically operated—each pouring 1500 lbs. of molten metal every hour in close proximity to "live" hydraulic lines—and you can readily see why selection of hydraulic fluids is important to Calumet & Hecla's Wolverine Tube Division.

Now the operation is made more reliable by the use of Shell Irus Fluid 902, a water-in-oil emulsion type fluid. Irus® Fluid was C & H's choice, after carefully studying other commercial hydraulic fluids—for many reasons:

1. Irus Fluid will not support combustion.
2. Irus Fluid has excellent lubricating properties.
3. Irus Fluid has hydraulic efficiency and equipment compatibility.
4. Irus Fluid is economical, costing about one-third less than other fire-resistant fluids.
5. Irus Fluid's bright yellow color makes it easy to spot and trace leaks.

In plant after plant, operators find that these advantages assure maximum safety to both personnel and equipment.

If you have a hydraulic line fire hazard, we suggest that you have the Shell Industrial Products Representative show you the many advantages in Irus Fluid 902; or write to Shell Oil Company, 50 W. 50th St., New York 20, N. Y., or 100 Bush St., San Francisco 6, Calif. In Canada: Shell Oil Company of Canada, Ltd., 505 University Ave., Toronto 2, Ontario.

SHELL IRUS FLUID 902

the low-cost, fire-resistant hydraulic fluid

SHELL

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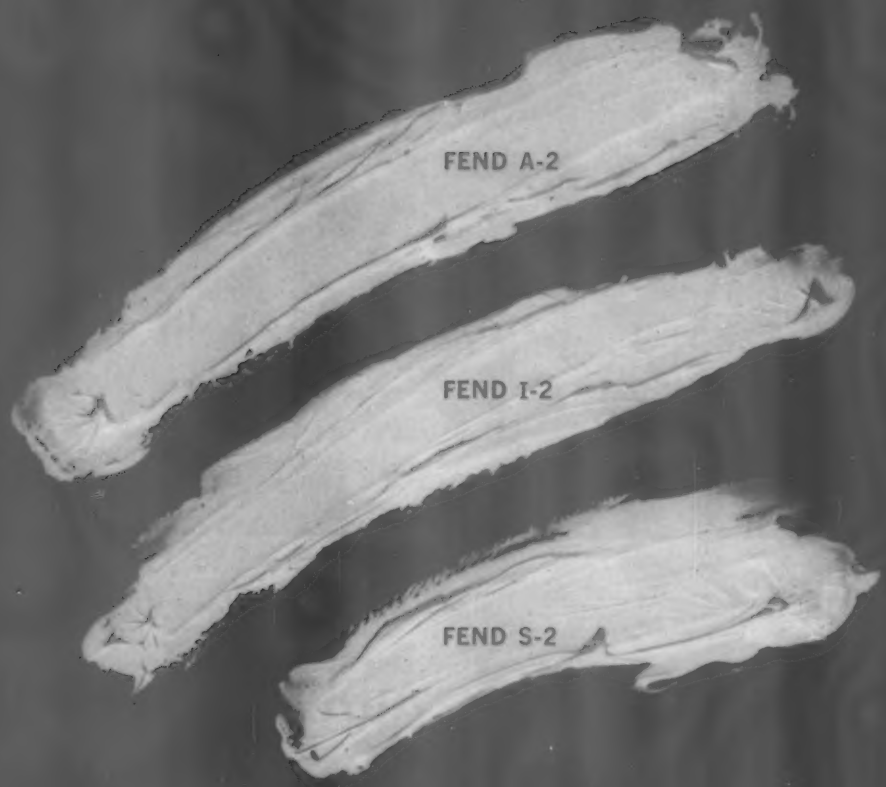
Circle Item No. 6—Reader Service Card ⟶

Every day – in many ways – MSA products safeguard millions of lives



Now: fewer M-S-A® Fend* creams do more protective jobs

MSA now offers a *complete* line of protective creams in a considerably *reduced* line.

Our new line of basic M-S-A Fend creams actually protects workers against *more* skin irritants than ever before. And we haven't sacrificed one bit of effectiveness in this streamlining reduction.

Selection of the *right* cream is quick and positive. Just tell the MSA representative the degree of solubility in the water of the irritant. Then, he can tell you the protective cream to use. It's that simple.

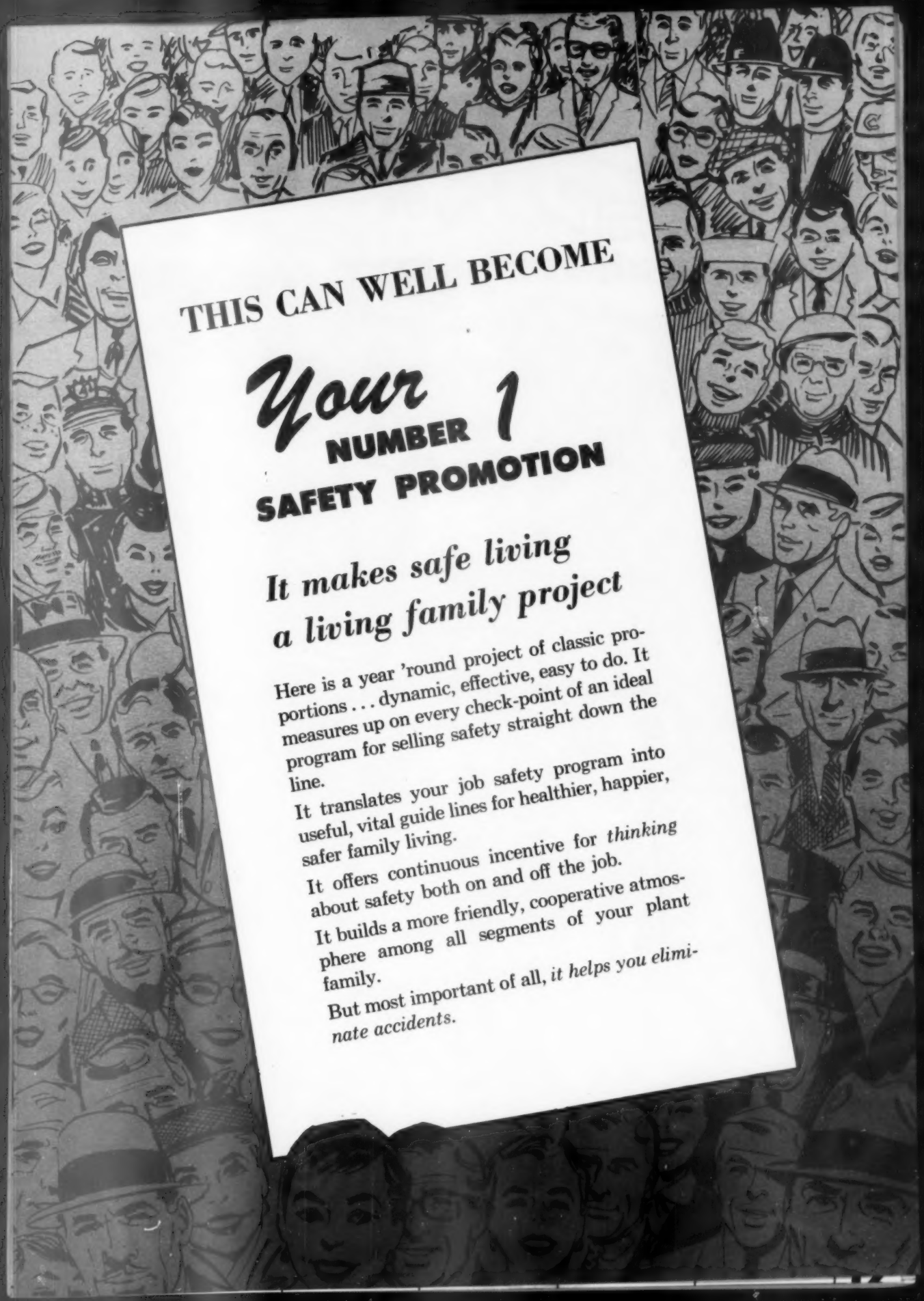
There are very real savings involved in ordering and stocking this simplified line. Available in 3 oz. tubes and 16 oz. jars, here, briefly, is the line:

FEND A-2: forms a physical barrier to water *insoluble* irritants.
FEND I-2: forms a physical barrier to water *soluble* irritants.
FEND S-2: forms a barrier against diverse irritants combining water-*soluble* and water-*insoluble* components.
FEND X: an ideal skin conditioner for both dry and oily skins.

New bulletin lists irritants combated by each of these new Fend creams. Write for your copy. Mine Safety Appliances Co., Pittsburgh 8, Pennsylvania. In Canada: Mine Safety Appliances Co. of Canada, Ltd., Toronto 4, Ontario.

*Trademark

MSA® SAFETY EQUIPMENT HEADQUARTERS



THIS CAN WELL BECOME

Your NUMBER 1 SAFETY PROMOTION

It makes safe living a living family project

Here is a year 'round project of classic proportions . . . dynamic, effective, easy to do. It measures up on every check-point of an ideal program for selling safety straight down the line.

It translates your job safety program into useful, vital guide lines for healthier, happier, safer family living.

It offers continuous incentive for *thinking* about safety both on and off the job.

It builds a more friendly, cooperative atmosphere among all segments of your plant family.

But most important of all, *it helps you eliminate accidents.*

Your NUMBER *1* SAFETY PROMOTION

the NATIONAL SAFETY CALENDAR

designed, tested and used by two and a half million people

It's brand-spanking-new from top to bottom, from front to back. NEW modern styling . . . NEW usefulness . . . NEW permanence . . . NEW ease of contest participation . . . and the Contest Participation Packet is filled with NEW ideas and promotion aids to step up safety knowledge and contest entries.

All this NEWness isn't change for the sake of change. It is soundly based on a vast amount of research and study of family desires and motivation. . . of the preferences of calendar donors, recipients and contest entrants.

The result is well worth the research. Your 1960 National Safety Calendar is a prize winning safety pin-up!

For many years the Council's calendar has been the most widely used safety training aid in the world. This 1960 edition—the best of a long line of winners—is truly destined to be the Number 1 safety promotion during the coming year.

LOTS OF SAFETY TIPS

PICTURES OF KIDS
in whimsical safety situations

ROOM FOR NOTES

MORE FLEXIBLE STYLE
for desk or wall use

Here's what they asked for:

FOLD-OVER PADS
easier to save and refer to

BOLD NUMERALS

ENVELOPE PACKED
(not curled up in tubes)

COVER PAGE
with illustrated greeting

SAFETY LIMERICK CONTESTS

Dynamic New TRIPLE FEATURE YEAR 'ROUND SAFETY PROMOTION

*NEW LOOK

An appealing cover page—an illustrated greeting—introduces the 1960 Safety Calendar. Each calendar is enclosed in the attractive 7½" x 9" envelope shown below; no creasing . . . no curling . . . much easier to add enclosures, mail or hand out to your people. Back cover features a three-year reference calendar for 1959, 1960 and 1961.

*NEW CONTESTS

A separate section of eleven tear-out contest pages bound into the 1960 calendars will step up contest entries . . . and they are *loaded* with safety tips. Eleven new SAVE-A-LIFE LINE Safety Limerick Contest—the most popular type, by far—baited with 363 tempting cash prizes!

Here's Your NEW Safety Calendar
We hope it makes each day of the year safer and brighter and happier for you and yours!
EVERY 3 SECONDS
HERE IS YOUR BIG MONTHLY CONTEST!

*NEW LIFE

Everything about the 1960 Contest Participation Packet is new and exciting. It's packed with ready-to-use showmanship—publicity, promotion, advertising—to keep your people referring to the safety tips, *thinking safety*, sending in contest entries. It's free when you give a calendar to each employee or order 100 or more.

Your 1960 Safety Calendar

© 1959, NATIONAL SAFETY COUNCIL

This calendar is for wall or desk. It offers a wealth of safety hints and eleven exciting new safety limerick contests. May it make 1960 and the years to come happier and safer for you and yours!

Prices: F.O.B. Chicago

1 to 9,	$.80 each
10 to 199,	.67 each
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10% DISCOUNT TO COUNCIL MEMBERS

Extra 5% Discount

on orders received before June 30, complete with imprinting instructions, and paid for within 30 days following date of invoice. Calendars will be shipped on date you specify.

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425 N. Michigan Ave. Chicago 11, Illinois

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75M 459

YOUR IMPRINT HERE

Free with 100 calendar order

GET HELP WITH A HEAVY LOAD

March 1960

SUN	MON	TUE	WED	THU	FRI	
FQ 5	FM 13	1	2	3	4	5
6	7	8	9	10	11	12

13 FULL-COLOR SAFETY PICTURES

HELP THE BEGINNER

USE PROTECTIVE EQUIPMENT

SAFETY BEGINS AT HOME

DON'T INVITE ACCIDENTS

MERRY CHRISTMAS

PLAN AHEAD

EXPECT THE UNEXPECTED

GUARD AGAINST HAZARDS

OBEY SIGNS

JOB TOO BIG? GET HELP!

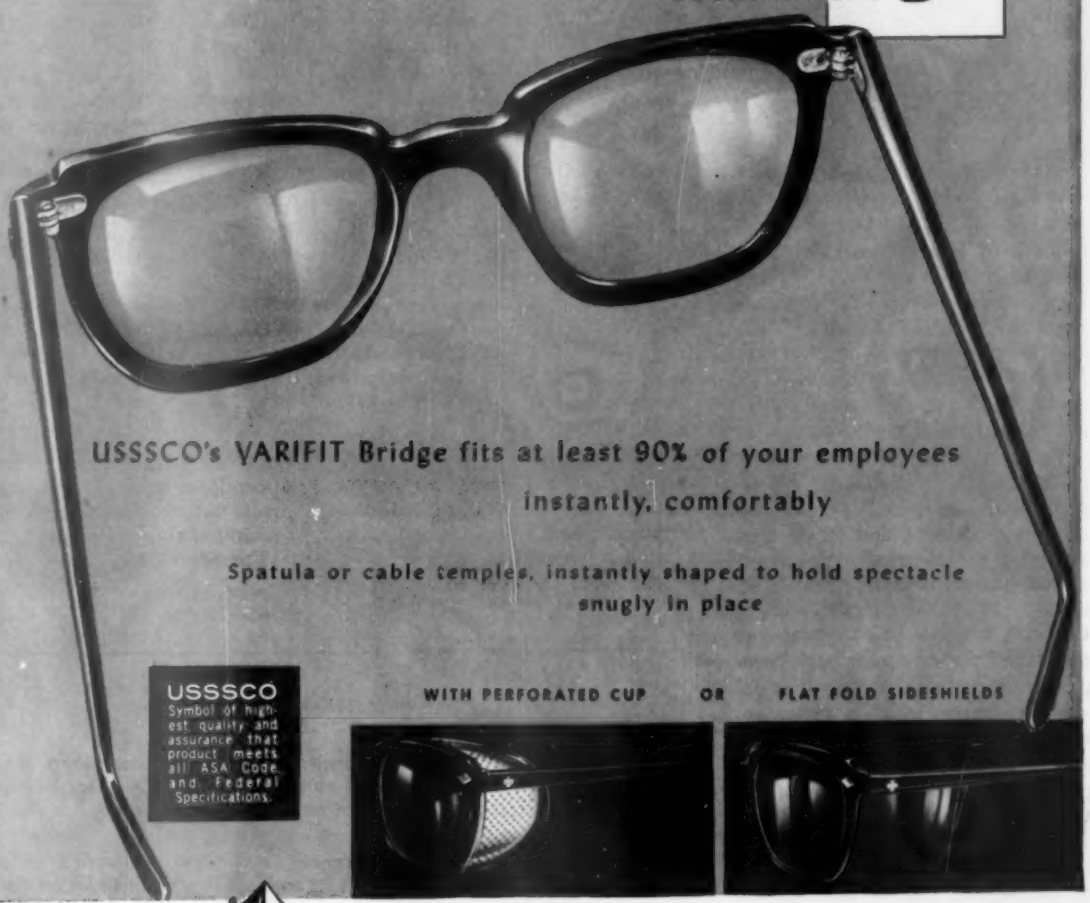
STAY ALERT

USSSCO's

NEW *Varifit* SAF-I-SPECTACLE

WITH THE NEW SAFETY FLANGE LENS CHANNEL

LOCKS IN LENS



USSSCO's VARIFIT Bridge fits at least 90% of your employees instantly, comfortably

Spatula or cable temples, instantly shaped to hold spectacle snugly in place

USSSCO
Symbol of highest quality and assurance that product meets all ASA Code and Federal Specifications.

WITH PERFORATED CUP OR FLAT FOLD SIDESHIELDS

Your Modern Safety Headquarters

All equipment in the USSSCO line is designed, manufactured, and sold direct to the user by United States Safety Service Company. There's a trained, full-time USSSCO Safety Service Engineer near you. See Yellow Pages, or write Kansas City.

UNITED STATES SAFETY SERVICE CO.
BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

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In Canada: PARMELEE, LTD., Toronto & Montreal

Circle Item No. 7—Reader Service Card

WIRE FROM WASHINGTON

By **HARRY N. ROSENFIELD,** Washington Counsel, National Safety Council

This report is an information service. Publication does not imply National Safety Council approval of or opposition to any legislation mentioned

AFTER AN EARLY and vigorous start, the pace of Congressional consideration of safety legislation has become more deliberate in comparison with executive action.

Accidents in the United States. The U. S. Public Health Service issued its second report on persons injured, by class of accident, from data procured in the U. S. National Health Survey. During the year ending June 30, 1958, "about 47 million persons received injuries that involved medical attention or caused them to restrict their usual activities for at least a day."

Of these, about 10 per cent were in motor-vehicle accidents, 17 per cent "while at work," 41 per cent in home accidents, and 32 per cent in "other or unknown" types of accident. The term "motor vehicle accident," the Public Health Service cautions, may not be comparable to other statistics on motor vehicle accidents, because its category includes any accident in which a motor vehicle was involved and is not restricted to moving vehicles nor to persons who were occupants of the vehicles.

The report shows that males in the 15-24 age group were injured at the highest rate of any age-sex group—482 per 1,000 persons per year; among females, the highest rate (319 per 1,000) was for those 65 years and older. In terms of major activity, the highest rate (335 per 1,000) occurred among persons whose major activity was going to school.

The report shows that each day during the year there were, on the average about 1,160,000 persons whose activity was restricted because of injuries and their effects. About 107 million days were lost from work during the year as a result of injuries and their aftereffects, and some 13 million days were lost from school during the year for similar reasons.

Industrial Safety. Atomic radiation exposure continues to be one of the most actively considered safety subjects in Washington, and is being discussed in the context of broader debates concerning general and weapon nuclear fall-out and the effect of strontium 90 on food and people. The Atomic Energy Commission ordered three makers of watches and clocks not to distribute products with luminescent dials containing strontium 90.

The AEC issued notice of its proposal to amend its regulations issued early in 1957 (See "Wire," April 1957), which established standards for the protection of its licensees, their employees and the public against hazards arising from the possession and use of radioactive materials.

The present proposed amendments would put into effect for AEC licensees the latest recommendations of the National Committee on Radiation Protection and Measurements, a non-governmental expert committee. The principal effect of the proposed amendments would be to reduce to one-third of present limits the lifetime accumulated radiation doses of workers in restricted areas, where radiation levels are monitored and controlled.

For individuals outside of con-

—To page 111

THE MONTH IN WASHINGTON

- Proposed AEC regulation amendment reduces to one-third of present limits the lifetime accumulated radiation doses of workers in restricted areas where radiation levels are monitored, controlled.
- International Labor Conference to consider protection of workers against radiation. U. S. prefers international recommendation as model in framing domestic legislation, not "treaty" type convention.
- Senate passes bill authorizing four-year program with $7½ million annually for federal air pollution control program.
- Federal Aviation Agency develops: safety rules for turbo-jets and jets; aircraft simulator training; en route inspection of scheduled flights; tighter standards on commercial flight training schools, flight instructors, private pilots; maintenance review board; repair station system.
- President proclaims week of July Fourth as National Safe Boating Week, and the week beginning July 19 as National Farm Safety Week.

For Better Results . . .

It is estimated that 27% of industry accidents are eye accidents. 3% are injuries *to* eyes, but an additional 24% are caused by poor vision due to faulty eye protection. Official government estimates show these eye-accidents cost industry millions of dollars a year. Further, poor sight holds back production anywhere from 25% to 40%. No wonder foul sight is one of your largest safety-efficiency problems.

Both types of MAGIC Cleaning Stations are Science's answer to foul sight. For goggles and glasses stay dirty and dangerous unless you make it as easy as possible to clean them. Choose the type station to fit your conditions:

About the MAGIC tissue that polishes—and protects—as it cleans—

Famous MAGIC Lens Tissue (Silicone-treated) polishes and protects lens as it cleans crystal-clear. Unmatched in quality; it far exceeds scientific specifications. Each sheet is BIG. It's 50% larger than usual and has twice the tearing strength. One sheet is big enough to clean the largest safety goggles. Every square inch is packed with Silicone's Sparkle Power—on boths sides of the sheet. It is interfolded, serving only one sheet at a time—not in bunches. And that's an exclusive feature with MAGIC. Yet it costs less.

About MAGIC Heavy-Duty Stations—

MAGIC Heavy-Duty Lens Cleaning Station is for dirty, oily areas or where Anti-Fog protection is needed—on plastics or any eyewear. MAGIC combined Cleaning & Anti-Fog Fluid combines all needed ingredients. And it's pressure-packed. Just touch the can and—*PRESTO*—the can does the rest. 1,400 applications per can. One can equals 4 old-fashioned bottles. No pump. No bottles to refill. Indestructible dispenser—with no moving parts—releases sheets 1-by-1, not in bunches, greatly reducing waste. Or, to use your home-made fluid, we can supply our Adapter ($2.70) with a giant 16-oz. bottle and plunger complete. MAGIC Heavy-Duty Paper, not silicone-treated, is superb, super-strong, wet-strength paper. Like its sister-product, the world's finest quality. No scratching on plastic, and no lint.

Yes, for better results buy the leader, buy MAGIC.

Exchange all your other Stations for Magic FREE

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Cleaning Stations

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for
DISTINGUISHED SERVICE

Winners of National Safety Council Awards for outstanding records

FOUR TYPES OF AWARDS are given by the National Safety Council to members in recognition of outstanding achievement in accident prevention:

1. Award of Honor
Available to (a) units which complete 3,000,000 man-hours without a disabling injury, and (b) units whose records, though not perfect, meet exacting standards. These standards take into account the previous experience of the unit as well as the experience of the industry in which it operates. A unit must qualify on both frequency and severity rates.

2. Award of Merit
Has similar but less exacting requirements. Minimum number of man-hours is 1,000,000.

3. Certificate of Commendation
For injury-free records covering one or more calendar years and totaling 200,000 to 1,000,000 man-hours.

4. President's Letter
For injury-free records covering one or more calendar years and totaling less than 200,000 man-hours.

Details of eligibility requirements may be obtained by writing to Statistics Division, National Safety Council.

Award of Merit

Air Vue Products Corp., Miami, Fla.

Algoma Plywood & Veneer Co., Algoma, Wis.

Allied Chem. Corp., Solvay Process Div., Baltimore, Md.

Allied Chemical & Dye Corp., two awards: Nitrogen Div., Orange, Texas; Nitrogen Div., South Omaha, Neb.

Allis Chalmers Mfg. Co., two awards: Massachusetts Works, Hyde Park, Mass.; Springfield, Ill., Works.

Aluminum Co. of America, five awards: Port Comfort, Texas, Works; Fabricating, Edgewater, N. J.; Foundry, Garwood, N. J.; New Kensington, Pa., Works; Rockdale, Texas, Works.

Aluminum Co. of Canada Ltd., Eastern Pwr. Div., Shipshaw, Que., Canada.

American Airlines Inc., two awards: Entire System, Flushing, N. Y.; Stations, Flushing, N. Y.

American Can Co., Dixie Cup Div., Anaheim, Calif.

AWARD OF HONOR is presented to the U. S. Air Force for outstanding achievement in accident prevention. Gen. Curtis E. LeMay, Air Force Vice Chief of Staff, accepts the award from Howard Pyle, president of the National Safety Council. The award was made in recognition of Air Force ground accident reduction in 1958 as compared to 1956 and 1957. Governor Pyle proclaimed the sustained effectiveness of the U. S. Air Force program. This is the Air Force's 9th consecutive award. Others in the picture are Maj. Gen. R. J. Reeves, W. L. Tubbs (Colonel, USAF, Ret.), and Maj. Gen. E. J. Rogers.

American Cyanamid Co., seven awards: Bound Brook, N. J.; Brewster, Fla.; Lederle Laboratories Div., Pearl River, N. Y.; Michigan City, Ind.; Mobile, Ala.; Princeton Plant, Penns Neck, N. J.; Surgical Products Div., Danbury, Conn.

American Factors Ltd., Pioneer Mill Co. Ltd., Maui, Hawaii.

American Greeting Publishers Inc., Cleveland, Ohio

American Oil Co., El Dorado, Ark., Refinery.

American Optical Co., Southbridge, Mass.

American Smelting & Refining Co., Baltimore, Md., Refinery.

American Sugar Refining Co., two awards: Baltimore, Md.; Brooklyn, N. Y., Refinery.

American Synthetic Rubber Corp., Louisville, Ky.

American Viscose Corp., Nitro, W. Va., Plant.

Anaconda Aluminum Co., Columbia Falls, Mont.

The Anaconda Co., Yerington Mine and Plant, Weed Heights, Nev.

Anderson Clayton & Co., Mrs. Tuckers Products, Jacksonville, Ill.

Appleton Electric Co., South Milwaukee Foundry Div., Chicago.

Argonne National Laboratory, Lemont, Ill.

Arkansas Oak Flooring Co., Pine Bluff, Ark.

Armstrong Cork Co., Lancaster, Pa.

Ash Grove Lime and Portland Cement Co., Springfield, Mo., Plant.

A.S.R. Products Corp., Staunton, Va.

Atlantic Coast Line Railroad Co., Property Protection Dept., Wilmington, N. C.

Automatic Sprinkler Corp. of America, Youngstown, Ohio, Plant.

Baldwin Packers Ltd., Honokohua, Maui, Hawaii.

Basic Incorporated, Quarry, Fostoria, Ohio.

Basic Vegetable Products Inc., Vacaville, Calif.

Bayuk Cigars Inc., York, Pa.

Bendix Westinghouse Automatic Air Brake Co., Elyria, Ohio.

Borden Co., Manufactured Products Div., Madison, Wis.

Bowman Dairy Co., Accounting, Chicago.

David Bradley Manufacturing Works, Bradley, Ill.

C. Brewer & Co., Ltd., five awards: Hakalau Plantation Co.; Hilo Sugar Plantation, Hilo, Hawaii; Kilauea Sugar Plantation, Hilo, Hawaii; Paauhau Sugar Plantation Co., Hilo, Hawaii; Pepeekeo Sugar Co., Hilo, Hawaii.

Brown & Bigelow, St. Paul, Minn.

The Budd Co., Hunting Park Plant.

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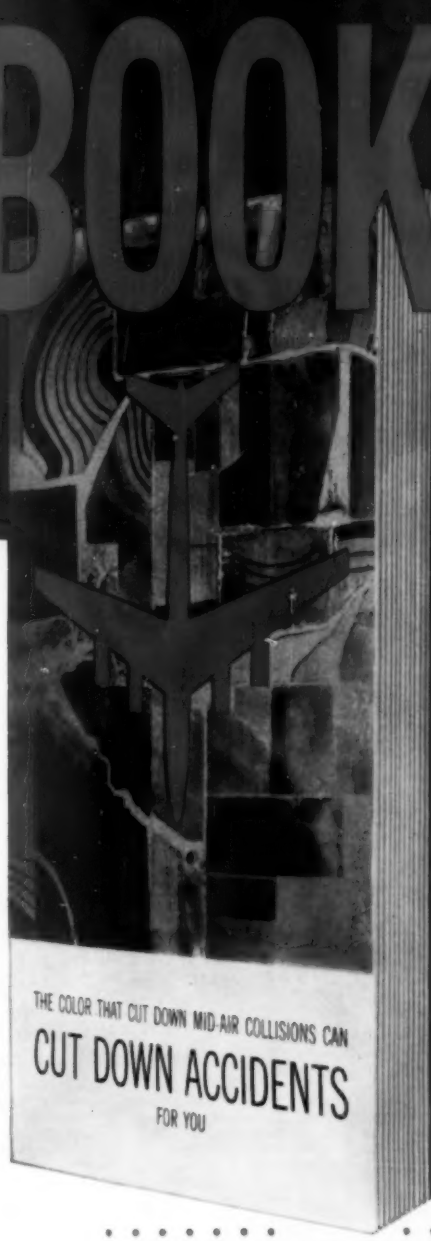
Circle Item No. 9—Reader Service Card→

FREE SAFETY IDEA BOOK

SHOWS HOW
ANY INDUSTRY CAN
REDUCE SAFETY HAZARDS
WITH DAY-GLO
DAYLIGHT FLUORESCENT
SAFETY PAINT!



Here's an exciting new concept in accident prevention! Exciting because it has already been used to drastically reduce mid-air collisions for the U. S. Air Force and flying in general. Exciting because of its many safety possibilities for every kind of industry.

Day-Glo daylight fluorescent paint guarantees instant identification of all types of indoor and outdoor safety hazards even when visibility is poorest. Colors are extremely vivid... up to four times as bright as the brightest ordinary safety colors such as International Orange. And they can be seen up to four times as far! Colors stay bright, too. They last as long as most ordinary paints when properly applied.

Switzer Brothers, the originator and major manufacturer of Day-Glo fluorescent colors, has furnished over 150,000 gallons of their fluorescent materials to the Air Force and Navy within the past year. Free booklet shows you how Day-Glo can be put to work in your organization to effectively reduce accidents. Send for it today. No obligation.

SWITZER BROTHERS, INC.

Manufacturer of

DAY-GLO Aviation Paint • DAY-GLO Industrial Paint
DAY-GLO Marine Paint

Day-Glo is a registered trademark of Switzer Brothers, Inc.

MAIL COUPON TODAY!

SWITZER BROTHERS, INC., 4732 St. Clair Ave., Cleveland 3, Ohio

Please send me your free booklet showing various ways to reduce accidents with Day-Glo Safety Paint.

Check Interest ☐ Industrial ☐ Aviation ☐ Marine
☐ (Other) _____

Name _____ Title _____

Company _____

Address _____

City and State _____

ANY MAN CAN WEED-PROOF 10,000 SQUARE FEET IN TEN MINUTES...with UREABOR

–just apply **UREABOR**® *and you can forget about weeds for the season!*

Think of the savings—in time *and* money—this weed killer offers you! UREABOR is the special granular weed killer meeting all requirements of industrial users. A little does a lot! One DRY application of only 1 to 2-lbs. per 100 sq. ft. creates weed-free areas anywhere for a whole year! UREABOR is safe, effective, economical and convenient. It's always ready for use direct from the bag—in the easiest possible way—to destroy weeds and protect your property from grass fires.

A SPECIAL SPREADER simplifies and speeds UREABOR applications at low rates with accuracy. Spreader holds enough UREABOR to treat 1250 sq. ft. without refilling; weighs a mere 6 lbs. Width of the swath can be adjusted.

UREABOR IS 2 HERBICIDES IN 1... The plant-destroying powers of 2 proven herbicides are combined in this granular complex of sodium borates and substituted urea (3-P-Chlorophenyl, 1-1, dimethylurea) to yield superior, non-selective results.

STANDARD PACKAGE IS 50 LBS. UREABOR is packed in multiwall paper sacks for easy handling—easy storing. A convenient package, easily disposable, for spotting at predetermined intervals to facilitate large-area applications.

Write for literature: **UNITED STATES BORAX & CHEMICAL CORPORATION**

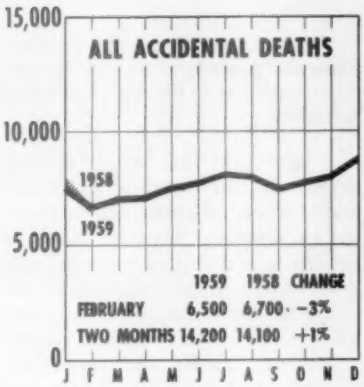
Pacific Coast Borax Company Division

630 SHATTO PLACE • LOS ANGELES 5, CALIFORNIA

Circle Item No. 10—Reader Service Card

THE ACCIDENT BAROMETER

Prepared by the Statistics Division, National Safety Council



ACCIDENTAL deaths in February numbered about 6,500 or 3 per cent less than in 1958. There were decreases in work and home accident fatalities, an increase in motor-vehicle deaths, and no change in public non-motor-vehicle fatalities.

The two-month death total was 14,200, an increase of 1 per cent over last year. Increases in motor-vehicle and public non-motor-vehicle were nearly offset by decreases in work and home accident fatalities.

Motor-Vehicle Deaths

There were 2,410 deaths from motor-vehicle accidents in February, or 2 per cent more than in 1958.

Deaths for the two months totalled 5,290, or 3 per cent above last year. The death rate per 100 million vehicle miles is not available for the two-month period, but for January the rate was 5.3, no change from 1958.

For the two-month period, 17 states had fewer deaths than last year, 2 had the same number and 29 had more deaths. States with the greatest improvement for the first two months of the year were: Montana, −29 per cent; South Dakota, −28 per cent; Louisiana, −27 per cent; Kentucky, −27 per cent.

Reporting cities with populations of more than 10,000 had a decrease of 6 per cent for February, but no change for the two-month period. Cities with more than 200,000 population having the largest reduction in deaths for the first two months of 1959 were: Norfolk, Va., −100 per cent; Toledo, Ohio, −67 per cent; Pittsburgh, Pa., −59 per cent.

Work Accidents

Deaths from work accidents in February numbered 900, or 5 per cent fewer than last year. The total for two months was 2,100, or 100 below 1958.

The February frequency rate per one million man-hours in 18 sectional accident prevention contests conducted by the National Safety Council was 4.87, an increase of 10 per cent over last year. The two-month rate was 4.81, a decrease of 7 per cent from 5.18 in 1958.

Public Deaths

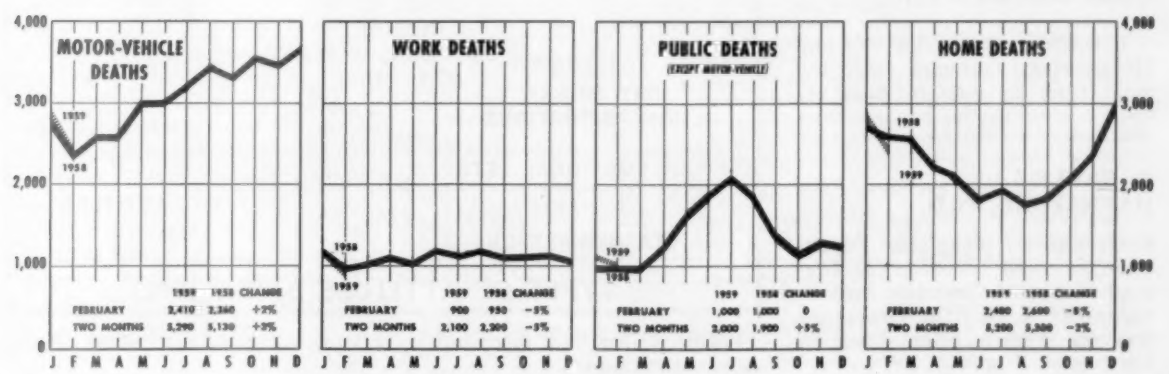
Public non-motor-vehicle deaths in February numbered about 1,000. The total for 1958 was also 1,000, but it included about 60 more disaster deaths than occurred this year.

Deaths during the two months totalled about 2,000, an increase of 5 per cent over last year. There were increases in transportation and firearms accident deaths and decreases in burns, drownings, and falls. Most of the increase occurred among children less than 5 years of age and persons 25 to 44 years old. Deaths in the 5-to-14 and 45-to-64 age groups also were up, while deaths in the 15-to-24 and 65-and older age groups showed downward trends.

Home Deaths

Deaths from home accidents totalled about 2,400, or 200 fewer than in February a year ago.

The two-month death total was 5,200, a reduction of 2 per cent from 1958. Decreases were recorded in deaths from poison gases, mechanical suffocation, and falls, while increases were reported in fatal poisonings, burns, and firearms accidents. Aside from decreases in the age groups 45 to 64, and 65 years and older, each age group showed an increase in deaths over 1958, with the largest change recorded for young people 15 to 24 years old.



Good Safety Attitudes

and how to develop them

THE THINGS which underlie safety attitudes are true for all attitudes. And our attitudes are what we live and enjoy life by—or worry, fret and live miserably by, and sometimes die by.

Words can be defined only in terms of other words. We are concerned with life experiences. In living situations it is attitude that triggers our behavior—not words alone. Our attitudes are the result of personal experiences, and their emotional content is often more important than facts, logic, and habits involved.

Let's define attitude in simple, straightforward words: "Attitude is the potential for action," or you may prefer this phrasing: "Attitude is a readiness to respond effectively and safely, particularly in tension-producing situations."

Our attitudes are intertwined with the roles we try to play in life, as they relate to the roles authority and our associates assign and expect us to play.

Remember, every man is actually three persons:

1. The man he thinks he is, i.e., the role he chooses or tries to play in life.
2. The man his boss thinks he is, i.e., the role he assigns him to play.
3. The man his associates, family, and friends think he is, and the role they assign him to play.

If a man's idea of his role and his associated attitudes differ too much from the roles his boss, associates, family, and friends assign him, he's in trouble. On the job it is authority that sets one's role and its associated *good attitude* patterns. It is when conflict exists between our attitudes and those set by authority or our associates that stresses, tensions, and anxiety arise. How we resolve these tensions in terms of action depends on our attitude—our readiness to respond effectively and safely in our attempts to alleviate and reduce the tension-producing situation.

In discussing "Good Safety Attitudes and How to Develop Them," I will divide my remarks into three parts:

First, we will discuss briefly the underlying psychological problems and factors in attitude formation. This will provide the foundation on which we can build soundly in developing good attitudes.

Second, the actual steps in the formation of attitudes will get our attention.

Third, we will discuss the practical plans and procedures we can use and how they relate to the steps in attitude formation.

I have said that words can be defined only in terms of other words and that we are concerned with living experiences. Since we want to get the actual feel of attitudes and what makes them function, I am going to use three actual accident cases to tie what I say to reality.

As we discuss the underlying psychological problems and factors, the four steps in attitude formation and the practical procedures involved, I will use these three accidents to give them meaning.

I want to describe these three basic types of accidents.

Case Histories

Case I. A maintenance man, instead of securing a ladder, used a small table to stand on to make an

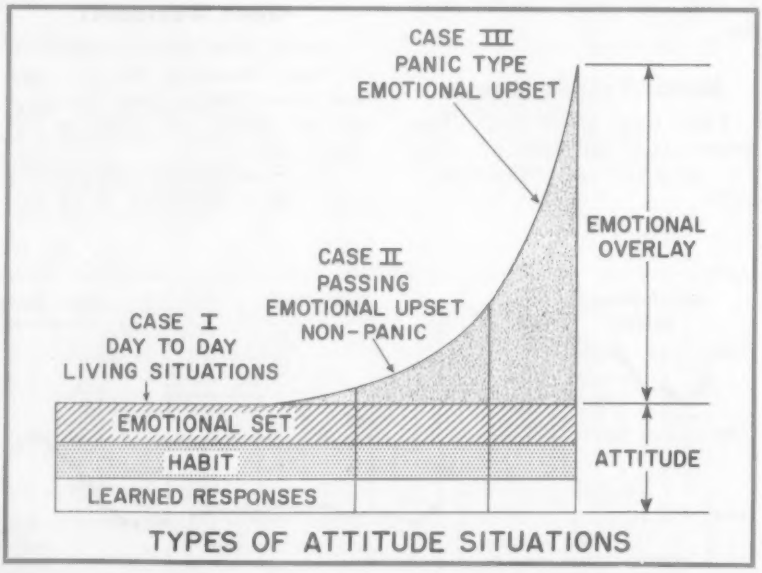


FIGURE 1. The three psychological, or living, situations under which attitude is forced to operate.

By EARLE S. HANNAFORD, Ph.D.

Safety Engineer, Long Lines Department, American Telephone and Telegraph Company. Condensed from an address before the ASSE Engineering Sessions, Western Safety Congress, Los Angeles, March 24, 1959.

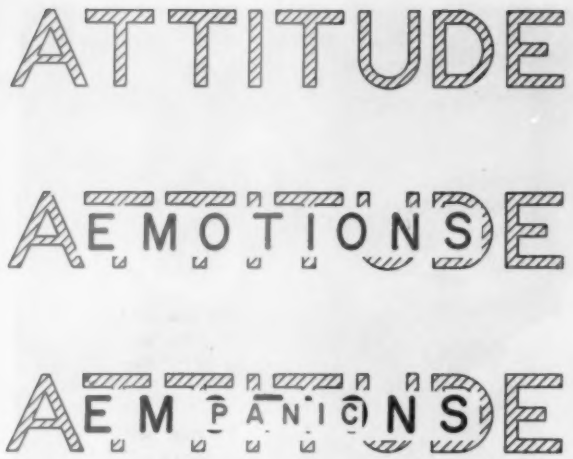


FIGURE 2. Attitude must often fight its way through emotional and panic situations.

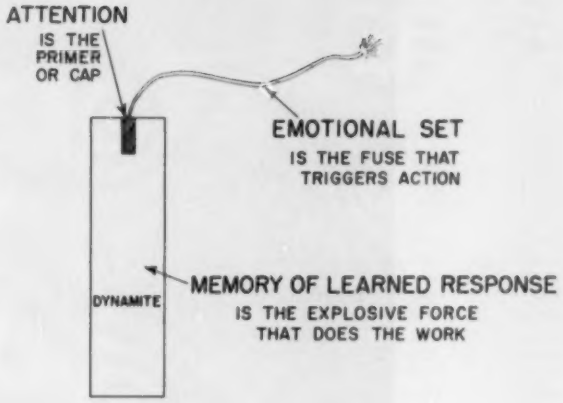


FIGURE 3. The three elements that make up attitude and how they function.

adjustment on equipment located 10 ft above the floor. As he stepped from the table top to the floor in one step, his wedding ring caught on an equipment detail, and his ring finger was severed at the first joint. The entire finger had to be amputated later.

This case occurred during a normal work operation. No unusual emotional situation or stress was involved. He violated instructions in his desire to complete the job quickly.

Case II. A restaurant employee used his finger to clear meat from the end plate of a meat grinder instead of using the rubber spatula. His right index finger was severed at the second joint.

At breakfast that morning his wife had pressured him to secure a loan. Since he was already heavily in debt, he refused. A heated discussion resulted. Normally he was mild mannered, competent, and easygoing.

Prior to the accident his supervisor had asked him to do a routine job, and he had flared up. Later he apologized. He also had had several heated encounters with fellow employees that morning.

Case II arose out of a passing, temporary emotional upset to a normally well-adjusted employee with an accident-free record.

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USING PRACTICAL SAFETY PROGRAM ACTIVITIES TO BUILD GOOD SAFETY ATTITUDE

Four Steps in Attitude Formation	Typical Safety Activities To Use
STEP I Laying the foundation for the attitude	**Mass Media** • Safety slogans, safety posters, safety talks. • Motion pictures and sound strip films of general safety nature. • Training classes and demonstrations for groups on job methods and theory. • Company safety policies. • Safety contests and competitions of a group or company nature.
STEP II Personalizing the attitude for the individual	**Learned Responses and Habit Formation** • On-the-job training in correct safe work methods. • Good supervision—immediate correction of violations of safe working practices to build safe habits. • Individual participation in safety meetings, safety planning, and safety inspections. • Motion pictures and sound strip films dealing with job methods and sequences. • Recognition of personal contributions by boss and higher authority figures. • Individual safety awards.
STEP III Fixation of the attitude emotional set	**Emotional Set** • Discussion of actual job-related accidents with individual participation. • Role playing—permits identification with and projection of self by individual. • Motion pictures with high emotional content relating to safety in general and to job performance. • Actual demonstration of their personal interest in safety by the boss and higher management, making it the No. 1 item, catching the attitude from authority figures.
STEP IV Keeping the attitude alive.	**Attention, Memory and Emotional Set** • Check-up on attitude status of individuals and groups using industrial safety attitude scales for employees and supervisors to see where emphasis is needed. • Attitude surveys.

Plan safety program to offset "safety program fatigue" by using some of the items designed to provide for Steps I, II and III since employees may be in any one of these steps or may have regressed from III to II or II to I.

LOOKS LIKE a scene from the old Harold Lloyd movie, "Safety Last," doesn't it? It's no job for a man with a weak heart, high blood pressure, or acrophobia. But guying the pole with stout Manila rope makes it less hazardous. (Photos by Plymouth Cordage Company.)

FIBER ROPE
Ties in with Safety

You'll find it serving faithfully on routine hoisting, hauling, and climbing jobs—and in some breath-taking spots

EVEN in this age of rockets and radioactivity, fiber rope is still an industrial stand-by, from 16-in. ship hawsers to cords used by workers to hoist tools.

Abaca (Manila) and agave (sisal) plant fiber ropes are widely popular. Synthetics are finding increasing use as rope materials. Among these are nylon, Dacron, Orlon, polyethylene, and glass fiber.

Nylon rope has about 1½ times the breaking strength of Manila and about 4 times its working elasticity. Nylon is suitable for shock loading, as required by safety lines.

When nylon rope is wet or frozen, its loss of strength is relatively small. Its resistance to abrasion is high, compared to that of hard fiber ropes. Nylon also is greatly resistant to mildew, rotting, and attack by marine borers in sea water.

Atmospheric exposure causes little loss of strength during long periods. Wet nylon rope runs through blocks as easily as dry nylon (there is no swelling). Splices can be made readily and develop almost the full strength of the rope.

Although resistant to petroleum oils and most common solvents and chemicals, nylon rope is affected by drying oils (linseed, for example) and mineral acids (such as sulfuric and hydrochloric). Where Manila rope begins to char at 300 F, nylon melts at 482 F but hardens when flame is withdrawn.

Dacron rope has about 90 per cent of the strength of nylon but has much less stretch. Dacron is not weakened by rot, mildew, or prolonged exposure to sea water. This fiber holds full strength when wet, shows little deterioration from long exposure to sunlight, and has good resistance to alkalies, acids, and abrasive wear.

Orlon rope has its greatest value in uses requiring high resistance to mineral acids and common solvents. It has fair-to-good resistance to

alkalies. Orlon is said to have the best resistance of all synthetics to deterioration from exposure to sunlight. Its resistance to rot is excellent.

The working elasticity of Orlon rope is less than that of nylon but more than that found in Manila. Orlon has good resistance to abrasion and flexing under dry conditions.

Polyethylene rope ranges up to 75 per cent stronger than Manila. Unaffected by rot, mildew, and fungus growth, polyethylene's outstanding trait is that it floats in water. It is highly resistant to a variety of acids (except nitric) and alkalies as well as to alcohol-type solvents and bleaching solutions. Hydrocarbons swell and soften this kind of rope, especially at temperatures greater than 150 F.

Polyethylene is excellent for use near high-voltage electric lines, but is moderately resistant to abrasion and high temperature. It will remain flexible at temperatures as low as —100 F, and can be used continuously at temperatures up to 220 F (and periodically at temperatures as great as 240 F).

Glass fiber rope has been used where resistance to high temperatures is essential, as in the electrical and chemical industries. Glass fiber rope is noncombustible, durable, resilient, and flexible.

It has excellent strength when dry, but not when wet. It is not recommended for use where abrasion and flexing conditions are severe and where rope is in contact with liquids. It is fairly resistant to mildew and rotting and is suggested for use where acid is a factor and where dielectric properties are required.

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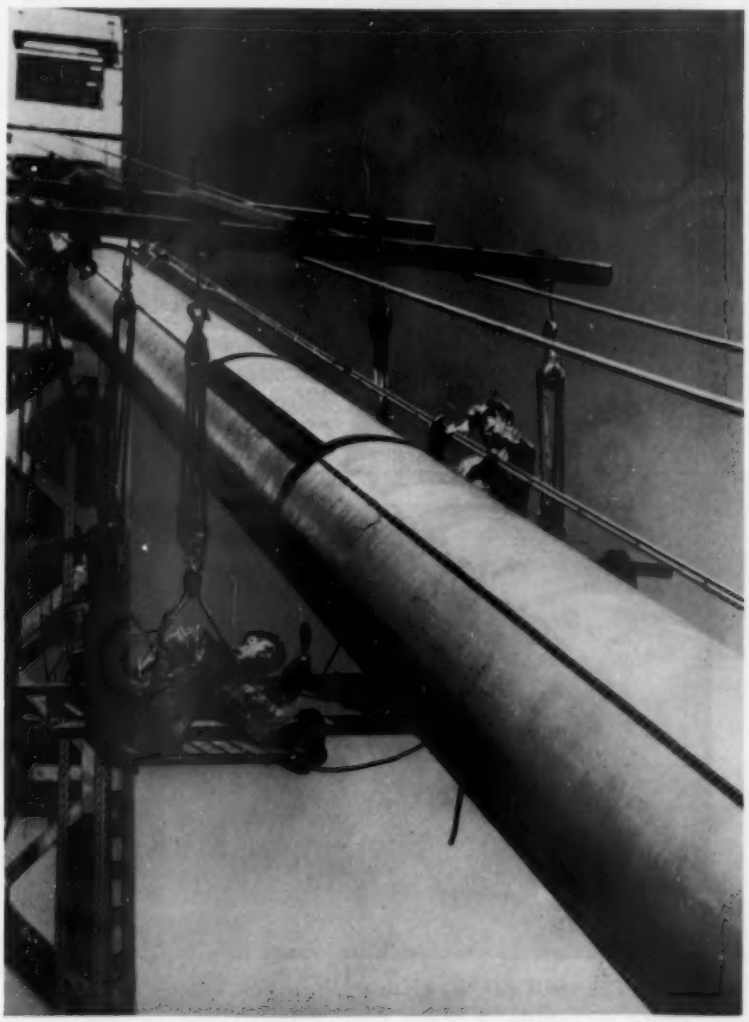
EFFICIENCY OF MANILA FIBER ROPE WITH SPLICES, HITCHES, AND KNOTS*

Jointure	Per Cent Efficiency
Full strength of dry rope	100
Eye splice over iron thimble	90
Short splice in rope	80
Timber hitch, round turn, half hitch	65
Bowline, slip knot, clove hitch	60
Square knot, weaver's knot, sheet bend	50
Flemish eye, overhand knot	45

*Results of test series at Massachusetts Institute of Technology, Cambridge, Mass.

BREAKING STRENGTHS AND SAFE LOADS—MANILA AND SISAL ROPE (3-strand)

Diameter	Circumference	Approx. wt. per ft.	Manila Rope Breaking Strength	Manila Rope Safe Load	Sisal Rope Breaking Strength	Sisal Rope Load Safe
(in.)	(in.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)	(lbs.)
¼	¾	.020	600	120	480	96
⅜	1⅛	.041	1,350	270	1,080	216
½	1½	.075	2,650	530	2,120	424
⅝	2	.133	4,400	880	3,520	704
¾	2¼	.167	5,400	1,080	4,320	864
⅞	2¾	.225	7,700	1,540	6,160	1,232
1	3	.270	9,000	1,800	7,200	1,440
1⅛	3½	.360	12,000	2,400	9,600	1,920
1¼	3¾	.418	13,500	2,700	10,800	2,160
1½	4½	.600	18,500	3,700	14,800	2,960
1⅝	5	.744	22,500	4,500	18,000	3,600
1¾	5½	.895	26,500	5,300	21,200	4,240
2	6	1.08	31,000	6,200	24,800	4,960
2⅛	6½	1.25	36,000	7,200	28,800	5,760
2¼	7	1.46	41,000	8,200	32,800	6,560
2½	7½	1.67	46,500	9,300	37,200	7,440
2⅝	8	1.91	52,000	10,400	41,600	8,320
2⅞	8½	2.15	58,000	11,600	46,400	9,280
3	9	2.42	64,000	12,800	51,200	10,240
3¼	10	2.99	77,000	15,400	61,600	12,320
3⅝	11	3.67	91,000	18,200	72,800	14,560
4	12	4.36	105,000	21,000	84,000	16,800



LET'S HOPE there's a net under the bridge while the painters are at work. They can depend on the rope if it has received proper care.

Slides Add Punch To Delco Safety

The camera has a keen eye and a good memory. It keeps a colorful record of inspections for safety meetings

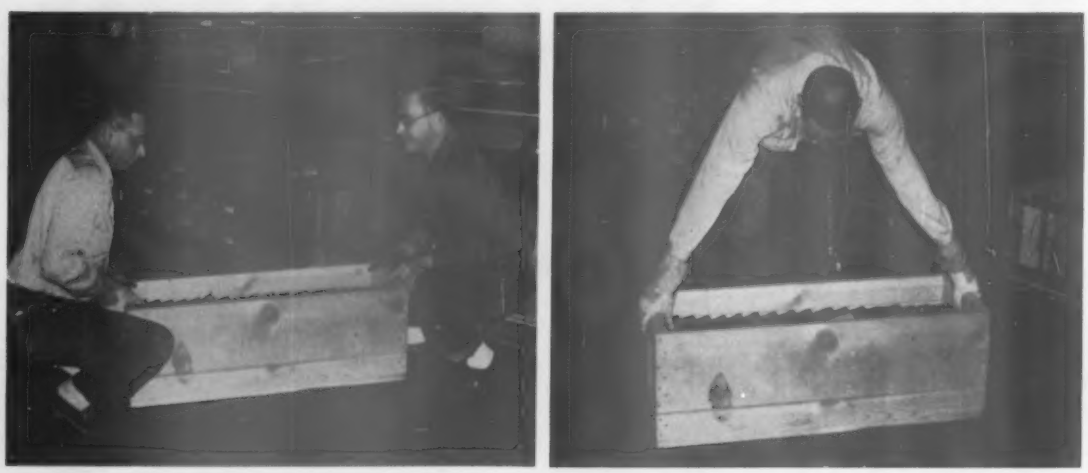
PHOTOGRAPHY is fun, as millions of shutterbugs have found. It can be a useful hobby, too.

When shooting pictures in a plant required a bulky camera, a tripod and a battery of floodlights, its uses were limited. But a moderately-priced camera with faster lenses and improved film—both color and black and white—have made it possible for the amateur to secure vast quantities of photographic material for the communications program.

Color slides for projection at safety meetings and training classes, and black and white prints for bulletin boards and employee publications, are adding life and interest to safety programs.

Safety has become a polychrome affair at the Delco Appliance Division of General Motors at Rochester, N. Y. Keyed to color slides, the Delco visual aids program is credited with keeping workers safety minded and the accident rates consistently low.

Management and supervisory personnel had been meeting monthly to review the firm's safety experience



***RIGHT AND WRONG.** Lifting is just one of many subjects that lends itself to the right-and-wrong technique. A 35mm camera and a flash gun can produce slides of familiar people and familiar scenes in realistic color to provide material for safety meetings and training classes.*

and to look for methods of improving it. As every safety man knows, keeping everybody interested and enthusiastic at these meetings requires a lot of ingenuity. New techniques and approaches are needed from time to time. So J. H. Bense, safety director for GM's two Rochester plants, decided to explore the further possibilities.

In a city famous for the manufacture of photographic materials, it was quite natural for Mr. Bense to turn to photography. And he attributes much of Delco's success in safety to the visual aid program which starts with the new employee and extends through the supervisory staff on up to management.

It was felt that the key to the whole safety program was the monthly meetings. A study of presentation techniques pointed to more and better pictures.

A few sessions proved the value of color slides. They gave the whole program a transfusion.

Safety committee meetings are attended regularly by management representatives, superintendents, and certain foremen. In a year each foreman attends at least one meeting. During the meeting general safety problems are discussed, and color slides taken in the plant during the month are projected. These slides include before-and-after views of hazards found and corrected.

Not all the pictures are horrible examples. Recognition of good work is an important part of the program, and pictures include examples

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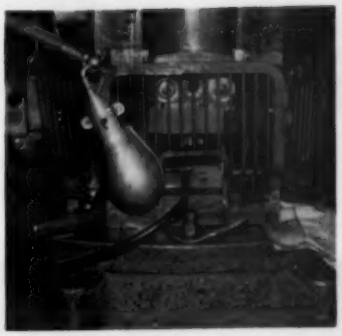
. . . A worker whose eyesight was saved by his safety glasses when the blade of the saber saw broke.

What the camera saw . . .



. . . A punch press with die effectively enclosed.

. . . A climbing hazard which was corrected before the next safety meeting.

. . . A soldering pot showing proper method of guarding and exhausting.

. . . A newly-installed guard for a hot light shade to prevent burns on head and arms.

Safety's Private Eye

. . . Closed Circuit TV

Surprisingly mature for its twelve brief years, closed circuit television is doing a man's job in numerous spots in industry

TV CAMERAS permit operators to feed stock into furnace, watch charge at its various stages, and detect any possible malfunction of furnace. (Steel and Tube Division, Timken Roller Bearing Company.)

SINCE ITS BIRTH in 1947 as an industrial tool for utility plant installations, closed circuit television has come far toward earning its spurs. In observing hazardous, tedious, hard-to-get-at work, CCTV is saving lives, time, and money for industry.

This pinpointed application of TV is expanding from two-dimensional black and white to color and 3-D uses. But 2-D, black and white is the workhorse, operating on four basic components: camera, control generating unit, cable, and a video monitor or receiver.

Impressed by CCTV's ability to observe people and processes, to transfer data, or serve as a teaching and training device, the NEWS contacted several CCTV manufacturers and a marketing concern in the electronics industry. We asked:

Is CCTV overrated as an industrial tool, in terms of long-time acceptance? What are some of the costs involved? How significant is color? What about 3-D in this field?

Statistics seem reliable measuring sticks of CCTV value—now and in the future. There are from 3,000 to 4,000 such installations in operation in this country, including about 6,000 cameras. The projected increase is 2,000 more systems for 1959, and 5,000 more for 1960.

At present, there are about 15 manufacturers of CCTV, with several more firms poised to enter the field. The market is divided about 60-40 between industrial-commercial users and the military. By

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By ROBERT DORSETT

on what a purchaser expects his particular system to do for him.

And what CCTV does is sometimes impressive, safetywise. It can see in almost total darkness in work areas that are dirty, dangerous, and downright unreachable for a human being. And it's being used in the air, on the ground, and underground —(Los Angeles and Cincinnati inspect sewers with CCTV.) Chiefly, however, this medium is a tool for reducing operating costs involving labor, materials, and lives.

For example, CCTV cameras (black and white) at one plant observe seven critical pressure valves in buildings spread over a 10-acre

←——— *—To page 79*

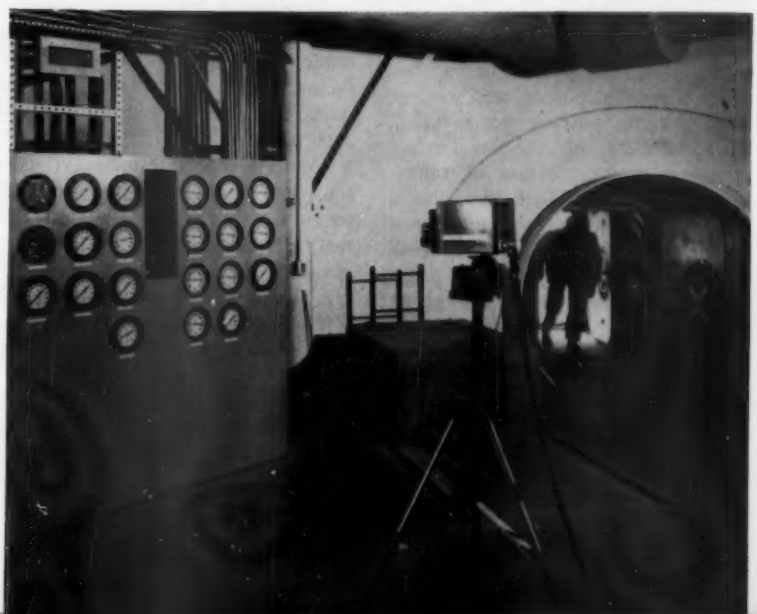
FOCUS ON SAFETY. Crossing tender for Delaware & Hudson Railroad adjusts closed-circuit TV monitor as he prepares for day's traffic schedule. Monitor gives sharp picture of switching engines approaching main line from spur track half a mile away. When switching engines are ready to enter main line, crossing tender makes sure track is clear and lowers gates at nearby crossing. Camera is mounted on pole near spur track and is equipped with windshield washer, wipers, and defrosting mechanism. (General Electric photo.)

CAMERA monitors recording instruments inside a boiling water reactor enclosure for benefit of operator in another building. Man is entering enclosure to inspect system which is installed at Pacific Gas & Electric Company's turbine-generator plant at Pleasanton, Calif. (General Electric photo.)

1963, estimates place the industrial-commercial market at about 70 per cent of the total.

One firm's surveys indicated that factory sales in CCTV for 1954-57 jumped from $1 million to $5 million, industry-wide. Sales for 1958 will have totaled an estimated $7 million. Anticipated 1959 sales (for monochrome alone) will probably be between $10- and $13 million, with this figure expected to double or treble in five years.

Minimum equipment for black and white, 2-D CCTV reportedly ranges between $1,100 to $1,200 (bottom price) to a top of $3,500 to $4,000. A great many installations, when complete, are in the $2,000 to $5,000 span, depending



(Fiction)

Why do some safety men fail? Our Safety Engineer and two colleagues ponder over three questions which might hold the key to success or failure

THREE QUESTIONS

By BILL ANDREWS

June 1, 1959

THE THREE OF US met by chance in Chicago on this rainy Monday. Each of us had business in the National Safety Council offices, but it was not business we shared.

At any rate, having met, we decided to have dinner together, and, by 9 o'clock, we were seated around a checked tablecloth in a Near North Side steak house.

Lonny Deralt, John Barr, and I are old friends, old colleagues in the safety movement, sometimes battlers together, sometimes against each other in the policy of tustles of NSC boards.

We are all of an age—early 50's. We were all pretty green when the war came, kids still serving as juniors. The war pitched us into increased responsibilities, and we became, as the postwar years rolled on, members of the leadership group in the profession of safety engineering. We've all three been general chairmen of our respective industrial sections. Lonny has been an NSC board member, and John heads one of the Council's planning committees.

What's more important, the three of us have been able to turn in good accident records over the years.

When we had disposed of steaks tonight, we sat a long time over coffee and conversation—and the conversation was shop. It started with personal talk, "What happened to Smith?" "Did you hear about Bill?" and the personal commentary on the successes and failures of our mutual acquaintances. There were an alarming number of failures among them.

Lonny suddenly said, "Look, we've mentioned a dozen men—two stomach ulcer cases, three heart attacks, two divorces, one case of alcoholism, three nervous breakdowns—whatever that means—and one guy just simply sick in bed with a bad appendix. Is this profession such a deadly one?"

I protested, "We talked about a lot of men who aren't sick. And naturally we'd speak about people facing any kind of catastrophe. We haven't established a high frequency rate of such cases in our group."

Lonny agreed with me—"We certainly can't generalize from selected cases. But this line of talk interests me, all the same. This planning committee I'm on is trying to evaluate the rewards and penalties of safety work—and the men we've mentioned sound like a pretty large group of the penalized."

I interrupted to say, "We all know, don't we, that this safety work puts pressure and strain on a man. Some men can take it. Some can't. That's true of any profession—and the breakdowns simply screen out the incapable."

Both John and Lonny swarmed all over me for that remark. Each cited cases of good men cracking, and of poor men who didn't crack. I had to admit they were right, and I withdrew my remark.

John put in this idea: "Remember that Sam Johnson once looked at a drunk in the gutter and said, 'There but for the grace of God go I.' If that's true of drunks in a gutter, how about cracked-up safety men? Are we also, but for the grace of God, the same victims as these men we've been talking about?"

We all agreed that we probably were blood brothers of the failures as well as the successes of safety work and life in general. Lonny suggested that we look at the causes of crackup from within ourselves. So we framed three questions and promised each other to answer them frankly.

1. What was the worst moment in your career?

2. What is the recurring part of the job you most hate to do?

3. Why do you think you can keep on taking this hated part of the job?

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Check Your X

47th National Safety Congress and Exposition October 19-23, 1959 Chicago

IN THE 1959 National Safety Congress, as in most large gatherings of this scope, making-do with available meeting space is a problem. But somehow space *is* found, and sessions *do* get together. This schedule may make your planning easier.

Production and distribution dates are set for the preliminary edition of the printed Congress program. To make deadlines, all program information should be at the Council by June 15.

Set up speeches, panels, demonstrations, and other session activities early, (with names, facts, and dates). This will make the preliminary program a useful and accurate foundation for the final Congress program.

DATE AND HOTEL ASSIGNMENTS

Sectional Sessions	(Hotel)	Oct. 19 Monday AM	Oct. 19 Monday PM	Oct. 20 Tuesday AM	Oct. 20 Tuesday PM	Oct. 21 Wednesday AM	Oct. 21 Wednesday PM	Oct. 22 Thursday AM	Oct. 22 Thursday PM	Oct. 23 Friday AM
Aeronautical Ind.	Hilton		X				X		X	
Air Transport	Hilton				X					
Auto. & Mach. Shop	Congress						X		X	
Cement & Quarry	Hilton				LX		X			
Chemical	LaSalle		X		X		X		X-7	
Coal Mining	Hilton		X		LX		X			
Commercial Vehicle	La Salle			X	X	X	X	X-jt.	L-jt.	
Construction	Hilton-Morr.		X		X		X			
Electrical Equip-T.	Hilton						X		X	
Fertilizer	La Salle		X		LX					
Food	Sheraton		X9		X		LX		X	
Glass & Ceramics	Congress		X		X		X			
Marine	Morrison		X	X	X	X	X	X	LX	
Meat Packing.-Tng.&L.	Congress		X		LX					
Metals	Hilton		X		X2		LX		X	
Mining	Congress		X		LX		X		X	
Occ. Health Nursing	Hilton			X		X			L	
Petroleum	Hilton		X		X		X		X	
Power Press-Forging	Congress				X		X		X	
Printing & Publ'g.	Hilton				X					
Public Employee	Hilton		X		X		X		X	
Public Utilities	Hilton						X		X3	
Pulp & Paper	Hilton		X		X		X5		LX2(1 jt.)	
Railroad	La Salle				X		X		X	
Rubber	Hilton		X		LX					
Textile	Hilton				X		X			
Trades & Services	Morrison		X6		X5		X			
Traffic	Congress		X	X	X	X	X	X	X	
Transit	La Salle			X	X	X	X	X-jt.	L-jt.	
Wood Products	Congress		X		X		X		LX-jt.	
Divisional Sessions										
Church	Hilton		X	X						
Farm	Palmer House			X	X	X	X	X	X	
Home	Hilton		Eve.X	X			X			
Labor	Hilton			X		X		X		
School & College	Morrison		X	X	X	X	X	X	X	
Women's Activities	Blackstone			X	X					
Youth	Hamilton			(Schedule not completed)						
A.S.S.E.—Subject Sessions										
A.S.S.E. Ann. Mtg.	Hilton			X	L					
Subject Sessions	Hilton, Congress & La Salle			X		X		X		
General Sessions										
Annual Council Mtg.	Hilton	X								
Banquet	Hilton				X-Eve.					
Early Morn. Sess.	Hilton			X		X	X			X
Films	Hilton						X-Eve.			

X One session; X3 Three group sessions; L Luncheon; X-jt. Joint session, two or more sections.

IDEAS THAT WORKED

Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

Royal Order of the Glass Eye

OFTEN it is easier to demonstrate how a certain job should not be done than it is to keep saying "don't." The Royal Order of the Glass Eye was the attention-getter featured in the safety display shadow box at Precision Electric Company in San Francisco.

The shadow box was used to display candid photographs of actual safety violations in the plant.

The featured safety idea can be changed from month to month. The thought of having one's picture snapped and displayed while performing an unsafe work practice caused a lot of employees to think twice before violating an eye protection rule.

Submitted through the Public Relations Department, Fiberboard Paper Products Corp., San Francisco.

THE WINNER IN MAY

The prizewinning idea in last month's issue was the safety stock certificate issued to departments of Maxwell House Division of General Food Corporation for injury-free work records.

Toe boards

PROTECTIVE toe boards, such as those shown along the edge of this railroad loading dock, seem to eliminate one of the too-frequent causes of trucks running off the dock. The guardrail sections are of fabricated steel channels. They are removable so the car can be spotted at any position.

Submitted by David B. Renegar, safety supervisor, The Chemstrand Corp., Decatur, Ala.

The case of the one-armed truck

THE HAND TRUCK shown was adapted for use by a porter who had lost one arm. With the adaptation he was able to continue working using this truck. The bracket consists of steel pipes secured to the side arms of the hand truck and welded to the axle at right angles. The casters are welded to a bottom member.

This adaptation to a standard hand truck was originally made some years ago, and the company reports they have not had a single back injury since, resulting from the use of a hand truck of this type. When they opened a new plant, they adapted all hand trucks similarly and likewise have reported no injuries. This idea was submitted by the Blue Buckle Overall Co.

Stop-and-go reporting board

REPORTING boards alone will not do much to reduce accidents but when used in conjunction with a concerted drive on unsafe operations, an interestingly-designed report board can attract a great deal of attention and can be of considerable help in the continuing promotion.

Such a board is shown here. It is 6½ in. deep, 24 in. high and 36 in. wide. The three holes from left to right are covered with green, amber, and red glass. An electric light is installed behind each colored window.

BACK the ATTACK on ACCIDENTS
DEPT 12
NO LOST TIME ACCIDENTS FOR 0 1 2 DAYS
MINOR — OR — CLOSE ONES
LOST TIME ACCIDENT
Read Details
Read Details

The green light is kept burning at all times until an injury occurs. The number of days without a disabling injury is indicated directly below. The amber light in the center is turned on to indicate a near-accident or a nondisabling injury. The red light indicates a disabling work injury, and it remains lit until the injured employee has returned to work.

One unique feature of this board is the installation of a small box at each end containing a detailed report of any near-accident or disabling injury. The reports not only explain the accident and injury but the preventive measures which have been taken to prevent a recurrence.

The rectangular windows between the two report containers are 8¼ in. by 10½ in. The slogans appearing in these spaces are those which have been submitted by employees in the department or sometimes from a wife or other member of the family of an employee. The name of the employee submitting the slogan is displayed at the bottom of the panel.

This idea was developed by Mr. J. Ross, general foreman at International Harvester Company's Motor Truck Division in Fort Wayne. The idea was submitted through N. D. Schepelmann, works safety supervisor.

EXTINGUISHING a blaze in magnesium chips with special dry powder extinguisher. Ordinary extinguishing agents may cause dangerous reactions. (Photos by Ansul Chemical Co.)

Fires That Water Won't Quench

Ordinary extinguishers are useless, often dangerous, for use on burning magnesium. Special extinguishing agents and techniques are needed

MAGNESIUM has two outstanding characteristics: it is the lightest of commercially useful metals, and it has unusual machinability.

The pure metal has limited industrial use, but some alloys, particularly those containing aluminum and zinc, combine high mechanical strength with lightness. These alloys have many structural applications.

Magnesium, alloyed with small amounts of other metals, is available to industry in fabricated forms, such as ingot, sand castings, die castings, permanent mold castings, extruded shapes, forgings, plate, sheet, and strip. These commercial alloys are marketed under various trade names.

Storage. Pigs, ingots, or billets should be stored in buildings of noncombustible construction. Floors and supports under piles of material should also be noncombustible. Floors should be well drained to avoid accumulation of water.

Ingot storage should be restricted to the ground floor level. There should be no basement or depression below the storage area into which water or molten metal might flow during a fire.

The quantity stored indoors in any one pile should be kept to a minimum—never more than 500,000 lbs.

Automatic sprinklers. If magnesium must be stored in a combustible building or is exposed to other combustible materials, sprinklers are desirable. They do not discharge water at a sufficient rate to extinguish magnesium fires by cooling, but they help to prevent ignition of surrounding materials. Where sprinkler protection is not available, 24-hour watchman service or automatic fire-alarm service should be maintained.

Automatic sprinklers should not be installed in melting and casting areas.

Precautions. Handling and fabrication of magnesium alloys generally involve no special hazards, except where the metal is in a molten state or in finely divided form. Since these conditions are frequently found in processing operations, precautions recommended by the manufacturers of alloys, the National Board of Fire Underwriters, and the National Fire Protection Association should be followed.

Safeguarding the use of magnesium is complicated by the fact that conventional techniques of extinguishment are ineffective and sometimes dangerous.

When ignited, molten or finely divided magnesium will decompose water and other oxygen-containing compounds and will combine with the oxygen, sometimes with explosive violence. Consequently, the presence of water near molten or finely divided alloys is a potential source of trouble.

Finely divided metal includes powder and fine chips produced by grinding, filing, sawing, or machining solid metal parts.

Magnesium is one of several common materials in which fires cannot be extinguished with a flood of water.

Burning magnesium also will combine with nitrogen or chlorine. Compounds containing these elements must be considered in the same class as oxygen-containing compounds. These facts about the chemical activity of magnesium must be considered when handling magnesium alloys in manufacturing processes.

Extinguishing Fires

Under properly controlled conditions, magnesium fires should seldom occur. But the characteristics of the material make it necessary to know how to extinguish burning metal.

First, remember that conventional extinguishers will not control such a fire, so keep on hand an ample supply of approved extinguishing agents and equipment for applying it.

Remember, too, that materials effective for controlling a small, relatively cool fire, may not work on a blaze of larger proportions. In this classification are graphite powder, powdered pitch, heavy mineral oil, rust-free cast iron borings, powdered soapstone, flux, and dry sand. However, with the exception of graphite, their use is limited.

The usual practice is to place containers or pumps filled with the extinguishing material near operations where fires are likely to occur. Additional supplies should be located at strategic spots in the plant.

Dry material should be kept in plainly labeled, covered metal pails with easily removable covers. A hand scoop should be provided at each pail for applying the material.

Where a fire occurs, requiring a large amount of extinguishing material, the material should be kept in drums, with long-handled shovels provided. Heat protective gloves and face guards should be provided for fire fighters.

Proprietary compounds. More effective than the simple materials are the more recently introduced proprietary compounds. These include G-1 fire extinguishing powder manufactured by Pyrene—C-O-Two Div., The Fyr-Fyter Company, and Met-L-X powder manufactured by Ansul Chemical Company. A more recent addition to extinguishing agents for metal fires is a liquid with the complicated name, trimethoxyboroxine, used by the Navy in aircraft crash fire fighting. The Navy uses the easily remembered symbol "TMB" when referring to the grade supplied by Callery Chemical Company for extinguishing purposes.

G-1 is an improved graphite base extinguishing agent which can be stored indefinitely without deterioration. It comes in 40-lb. pails and 325-lb. drums. It is usually applied with a shovel or scoop or directly from a 7-lb. dispenser tube. These may be mounted on a rack near the operation.

Met-L-X is a free-flowing powder suitable for application from specially designed gas-pressure-type extinguishers. When applied to burning metal, it fuses and forms an air-excluding crust. It is noncorrosive, nonabrasive and nontoxic and does not deteriorate under normal temperatures. It is available in 50-lb. pails. Extinguishers for application of Met-L-X have capacities of 30, 150, and 350 lbs.

These extinguishers are finished in bright yellow enamel to distinguish them from the red conventional extinguishers.

TMB so far has been used principally for fighting aircraft crash fires. Tests conducted by the Naval Research Laboratory indicate that, being a liquid, it has a good range

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MAGNESIUM ALLOYS in solid form are difficult to ignite but protective measures should be provided.

Are You Teaching?

. . . or *just telling?*

A lesson plan makes the difference

THE OLD CLICHE "telling isn't teaching" is a well-known expression, but unfortunately it is not always fully understood by aspiring instructors. Teaching by telling, or the oral method of presenting information, has a definite place in training. However, the telling implies something more than mouthing words. There must be a plan, preferably a written plan, if the telling is to become effective teaching.

Job instruction training (JIT), which became very popular and widely used during World War II, follows a definite procedure. Not all training is of the job instruction type, where an actual job is to be performed. In addition to the knowledge and skill that goes along with doing a job, there are many facts, principles, concepts and ideas that should be taught as separate sessions.

All of these can be taught more quickly and with more lasting results if a plan is used, more commonly referred to as a *lesson plan.* This type of plan, while standardizing training, also:

1. Helps keep and present material in its proper order.
2. Helps avoid the omission of essential information.
3. Provides, or should provide, for some form of student participation.
4. Acts as a timetable.
5. Places proper emphasis on items to be covered.
6. Gives confidence to a new instructor.

By L. C. SMITH

Engineer, Industrial Department, National Safety Council; Staff Representative, Petroleum and Metals Sections.

Names for the parts of a lesson plan may vary, and the order may not always be the same. This is a good sample:

1. **Title:** Must indicate subject matter being taught, in a clear concise manner.
   Sample—Methods of Building a Safe Working Force.
2. **Objectives:**
   a. Should state reason for teaching the subject.
   b. Should limit subject matter.
   c. Should be specific.
   d. May be divided into a major and several minor objectives for one session.
   Sample—To teach students how to figure frequency and severity, so they can compare their company's experience with similar companies. To familiarize students with various methods of keeping accident records, and how to use the Z 16.2 Code.
3. **Training Aids:** Should list such items as actual equipment or tools to be used, and films to be shown.
   Sample—Show pair of safety shoes, construction of a hard hat.
4. **Introduction:**
   a. Should tell students the value of the subject.
   b. Should get students thinking along the same lines.

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SELF-CHECK TEST FOR INSTRUCTORS

A good instructor should be able to answer Yes to at least 18 of these questions. Under 15 would be below average.

	Yes	No
1. Do you check your classroom for ventilation, lighting, seating arrangement?	___	___
2. Do you prepare a lesson plan?	___	___
3. Do you use training aids when possible?	___	___
4. Do you preview all films before showing them?	___	___
5. Do you use test results to find weak points in your teaching?	___	___
6. Do you vary your type of presentation according to the material?	___	___
7. Do you stay on the subject?	___	___
8. Do you cover the material in each lesson?	___	___
9. Do you make any attempt to know your students and to learn their names?	___	___
10. Do you introduce yourself to each class?	___	___
11. Do you make clear the objectives of the lesson?	___	___
12. Do you summarize each lesson?	___	___
13. Do you introduce each new subject and explain its importance?	___	___
14. Do you refrain from using sarcasm in your class?	___	___
15. Do you start and dismiss your class on time?	___	___
16. Do you have all your equipment ready and tested at class time?	___	___
17. Do you talk directly to the class and avoid such practices as staring at the floor, pacing the floor, juggling a piece of chalk?	___	___
18. Do you keep your meeting place orderly?	___	___
19. Do you use words that are easily understood by the class?	___	___
20. Do you make assignments, and are they clear?	___	___

A NATIONAL SAFETY COUNCIL TECHNICAL SERVICE

DATA SHEET 283 (Revised)

LIQUID OXYGEN

Published by The National Safety Council
425 North Michigan Ave., Chicago 11, Ill.

1. Liquid oxygen is an odorless, pale blue, transparent liquid which at normal atmospheric pressure boils and becomes gaseous oxygen at a temperature of —297.4 F (—183 C). Between —297.4 F and —361.1 F (—218.4 C) it remains in a liquid state at atmospheric pressure. Below —361.1 F at atmospheric pressure, oxygen freezes. At higher pressures, the boiling point of liquid oxygen increases. At a pressure of 710 psig (725 psia), oxygen remains liquid at temperatures up to —180.4 F (—118 C).

2. A mixture of liquid oxygen and other atmospheric gases, chiefly nitrogen, is available as "liquid air." It should be called and treated as medium-purity liquid oxygen, since its properties dictate the same care in handling as used with high-purity liquid oxygen.

3. At normal atmospheric pressure, 760 mm of mercury, high-purity liquid oxygen has these properties:

Density	9.54 lbs/gal. (U.S.)	(at –297.4 F)
	71.4 lb/ft³	(at –297.4 F)
	2.5 lbs/liter	(at –297.4 F)
Volume expansion on evaporation (liquid to gas):	1 liter liquid oxygen =	862 L gaseous oxygen at 70 F.
	1 liter liquid oxygen =	30.44 cu. ft. gaseous oxygen at 70 F.
Latent heat of vaporization:	50.9 Cal/gm = 91.7 BTU/lb.	
Boiling point at one atmosphere:	–297.4 F.	

This Data Sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable safety procedure in the field is necessarily included. This Data Sheet should not be confused with American Standard Safety codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

Production of Liquid Oxygen

4. Atmospheric air is filtered and treated to remove contaminants. The air then is compressed, cooled, dried, and filtered further until liquefied. Liquid air is essentially a mixture of 1/5 oxygen and 4/5 nitrogen. Unwanted component gases are then removed at various temperatures by a fractional distillation process, leaving 99.5 per cent liquid oxygen. Oxygen remains a liquid when its temperature is below —297.4 F at one atmosphere, and will vaporize into gaseous oxygen above —297.4 F at one atmosphere.

Hazards

5. Liquid oxygen is non-flammable and non-toxic. Hazards of high and medium-purity liquid oxygen are the same. The same precautions will apply to the handling of both.

6. Liquid oxygen has a much greater capacity to support combustion than air has. Mixtures of liquid oxygen with powdered organic materials under proper conditions may detonate. If vapor from liquid oxygen mixes with gaseous fuel in proper proportions, the mixture will explode in the presence of a sufficiently intense source of ignition.

7. If liquid oxygen is confined in a "liquid-full" container and allowed to warm to room temperature, a pressure of about 40,000 psi can develop—enough to rupture the strongest ordinary high-pressure container.

8. Organic materials, clothing, oils, and similar substances exposed to liquid oxygen will burn violently, if ignited, even several minutes after exposure.

FIGURE 1. Special box tank cars are used to ship liquid oxygen. This car holds enough liquid oxygen to supply the equivalent of gaseous oxygen contained in more than 3,000 244-cu.ft.-capacity cylinders.

9. Potentially hazardous concentrations of oxygen can collect temporarily in confined areas, if liquid oxygen is kept in poorly ventilated places.

10. Because of the extreme low temperatures of liquid oxygen, the physical properties of materials it contacts are apt to be greatly altered. This fact must be considered whenever liquid oxygen is handled.

11. Serious burns can result, if liquid oxygen remains in contact with skin for more than a few seconds. Burns also result, if contact is made with uninsulated pipe or vessels containing liquid oxygen.

12. Detailed information on fire hazards and protection, when handling liquid oxygen around aircraft, can be found in NFPA Bulletin No. 410-B.

Use

13. Liquid oxygen, after being converted into a gaseous form, is widely used: with acetylene and other fuel gases for metal conditioning and cutting, welding, hardening, and cleaning; in the manufacture of steel and synthetic chemicals; for therapeutic purposes, in resuscitation, and with other gases in anesthetic mixtures.

14. Various types of aircraft have liquid oxygen converters for the storage of liquid oxygen and for its conversion to gaseous oxygen as required by the aircraft's oxygen system.

Shipping and Storage

15. Although most oxygen is used in the gaseous form for convenience and economy in handling, large amounts are often shipped as a liquid and stored as a liquid for later conversion to the gas, or are immediately converted to the gas for storage or use.

16. Detailed information on storage of liquid oxygen can be found in NFPA Bulletin No. 566, *Standards for the Installation of Bulk Oxygen Systems at Consumer Sites.*

17. The liquid is stored and shipped in specially-designed and well-insulated containers which maintain the pressure of the vapor above the liquid at atmospheric pressure or at a low positive pressure. The temperature of the liquid will remain at or near its normal boiling point (—183 C); and any heat leak into the container will not alter the temperature, if the container is vented to permit vaporized oxygen to escape.

18. Storage and shipping tanks and their insulation should be of non-combustible material. If the insulation is contained by an outer metal jacket, the jacket should be vented or fitted with adequate blow-out safety devices; thus, if leakage occurs, pressure will not build up and rupture the vessel.

19. Equipment and techniques used in distribution of liquid oxygen usually are determined by requirements of the user's installation. The supplier must instruct the user in proper use of the supplying unit. These instructions and recommended precautions should be followed exactly. Whether the supplying unit is a box tank car, a transport truck, or a small vacuum jug, these general safety measures always will apply.

20. Storage of liquid oxygen in other than ICC Type 4L cylinders should be outdoors, guarded by fencing or in a separate noncom-

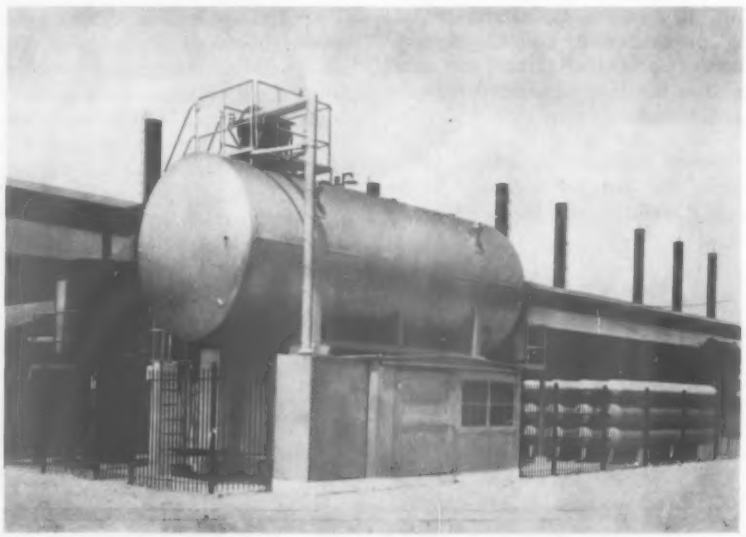

FIGURE 2. A large stationary liquid oxygen storage tank capable of storing the equivalent of about 1,500,000 cu. ft. of gaseous oxygen.

bustible building with adequate ventilation in accordance with NFPA Bulletin No. 566. Valves and safety devices should be protected from ice and snow accumulations, where necessary. Indoor liquid oxygen storage areas should be for oxygen storage only; all construction materials should be noncombustible. These storage areas should be clearly placarded and restricted as to smoking and open flames.

Precautions

21. Liquid oxygen, or any mixture containing liquid oxygen should be used only by persons familiar with its properties and properly trained in its use. These precautions are recommended regardless of use made of the liquid oxygen:

22. Liquid oxygen equipment must be kept clean and preferably should be built of a shiny stainless steel or painted white or a bright color to make dirt and debris conspicuous. No organic matter or flammable substance should be allowed to contact the liquid or its vapors. Some materials that may react violently with oxygen under proper conditions of temperature and pressure are oil, grease, kerosene, gasoline, propane, butane, alcohol, ether, cloth, wood, acetylene, hydrogen, illuminating gas, paint, soap, tar, or dirt and dust.

23. Liquid oxygen should be carried only in suitable containers that will permit the escape of vapors while controlling pressure buildup in the containers. Fire, sparks, and other sources of ignition should be kept away from vapors resulting from evaporation. Ample ventilation will prevent concentration of the vapor.

24. Because of its low temperature, the liquid should never contact flesh.

25. Physical properties of many materials at extreme low temperatures may be different from properties of the same materials at normal temperatures. Materials cooled to liquid oxygen temperatures should be handled carefully until their properties under these conditions are known.

FIGURE 3. A portable liquid oxygen cart used in the aircraft industry to fill aircraft converters. Its color is bright to show dirt.

26. Metals used for liquid oxygen equipment must have satisfactory physical properties at low operating temperatures. Since some steels lose their ductility when subjected to liquid oxygen temperatures, the steels are considered too brittle for this service. The same difficulty is met with ferrous alloys except austenitic nickel-chromium alloys. These latter alloys have good ductility at the low service temperatures under consideration. Most widely known of the austenitic nickel-chromium alloys is 18-8 stainless steel.

27. Certain nonferrous metals have sufficiently good ductility in the wrought condition to be acceptable at extremely low temperatures. Among these are copper, bronze, brass, copper silicon alloys, monel metal, and aluminum.

28. It is hazardous to introduce a substance which is at normal room temperature into a liquid of such extremely low temperature as liquid oxygen. There is a violent evolution of gas, and there is likely to be much splashing of the liquid. Individuals doing this work should be instructed in the hazard and should always wear a full face shield and protective clothing.

29. Liquid oxygen aircraft servicing operations should be conducted in placarded outdoor locations, while no other aircraft maintenance operations are under way. The aircraft shall be electrostatically grounded, and the oxygen cart and/or oxygen converter electrostatically bonded to the aircraft.

30. Each new use for liquid oxygen should be carefully considered. Before starting such use, safety precautions should be completely outlined and personnel properly instructed and trained. For instance, small amounts of liquid oxygen are frequently handled in glass Dewar flasks. These flasks occasionally collapse, particularly if the liquid oxygen is splashed on the joint at the neck. These flasks should always be kept behind protective screens while in use.

31. Heat of vaporization of liquid oxygen is low. Also, small quantities of liquid produce a large volume of gas at atmospheric pressure. Small heat flow from the atmosphere into the liquid will produce an appreciable volume of gas. Thus, all storage vessels should have safety pressure relief devices, unless the container is vented so gas cannot be bottled up. Lines and vessels, in which liquid oxygen may be trapped between closed valves, should be equipped with safety pressure relief valves. If there is a chance the relief valve may freeze, as from ice from dripping water or condensed moisture, such vessels and lines should have rupture discs.

32. Safety pressure relief valves and rupture discs should be placed and protected so water cannot splash or condense on them.

Handling Precautions

33. Men handling oxygen should have thorough instruction about the nature of the material. Careful

training is essential to minimize accidental spilling, to prevent damage from the coldness of the liquid and concentrations of the gas.

34. Goggles or face shields, gloves, and aprons should be worn. Asbestos gloves, large enough for quick removal, are preferred by some workers. Others prefer tight-fitting rubber gauntlet-type gloves with the gauntlets inside cuffless sleeves. Aprons may be rubber or nonabsorbent, noncombustible material, such as asbestos. High-topped shoes, with the cuffless trousers worn outside the tops, are also desirable.

35. When pouring liquid oxygen from one container to another, the receiving container should be cooled gradually to prevent thermal shock. Liquid oxygen should be poured slowly to avoid splashing. The receiving vessel should be vented to the atmosphere, and high concentrations of escaping oxygen not allowed to collect.

36. Liquid oxygen should be poured only into a clean, dry, empty container, unless it is certain that the container already holds liquid oxygen.

37. Small insulated-type containers of liquid oxygen should be covered with the cap provided with the container, when not in use, to prevent an accumulation of moisture and plugging of the container outlet.

38. To insure safe control of liquid oxygen in laboratories, test stations, or wherever it is used, orders should clear through a responsible person who will make certain the potential user is aware of dangers involved and will follow recommended procedures.

FIGURE 5. These are Dewar vessels, used for handling liquid oxygen. Such flasks should always be kept behind protective screens while in use. (Courtesy National Cylinder Gas Division of Chemetron Corporation.)

ACKNOWLEDGMENT

This Data Sheet was originally prepared by the Metropolitan Chapter of the A.S.S.E. in cooperation with L. G. Matthews of Linde Air Products Co. It has been revised by the Executive Committee members of the Aeronautical Industries Section, with special assistance from L. G. Matthews.

This revision has been extensively reviewed by members of the National Safety Council, representatives of chapters of the A.S.S.E., and by selected representatives of the Compressed Gas Association.

This Data Sheet has been approved for publication by the Publication Committee of the Industrial Conference of the National Safety Council.

FIGURE 4. Liquid oxygen aircraft servicing operation is conducted with aircraft electrostatically grounded, and the oxygen equipment electrostatically bonded to the aircraft. *Photo courtesy McDonnell Aircraft Corp.*

news briefs

Dirty word

Dermatitis, long notorious as the cause of more disability and compensation payments than any other occupational disease, is cropping up more often among employees exposed to new detergents, housekeeping chemicals, and cleaning compounds. New products should be watched closely for their effects on the skin. It is important to make the distinction between allergy and dermatitis. Much dermatitis is blamed on allergy, and skilled workers are transferred from jobs because of "allergy" when such proved preventives as creams and cleanliness would foil the real culprits.

Gage standards

To keep up with progress in instruments and gaging techniques of the past ten years, the American Standards Association is planning to revise its Standard on Pressure and Vacuum Gages.

Versatile infrared

Infrared radiation detectors, best known for their military applications, first in sniperscopes and later in homing missiles, are spotting hot boxes, inspecting drugs to make sure they are bottled with the proper labels, and show promise for regulating chemical and glass manufacture.

Dust movies

Not saddle soap operas, but high-speed motion pictures were the answer to a silica flour problem reported recently. The dust was so fine it ran like water. Some high-speed films, originally made for engineering studies, revealed the sources of dust and the patterns it made. The photographic record helped spot maintenance problems and made simpler hood design possible.

Worker health program

The 1959 National Health Forum suggested a program that includes: a national institute of occupational health; teaching of environmental health in schools, including medical schools; improved health programs in health-hazardous industries; better communications between researchers and between researchers and designers; better labeling; community industrial health councils; more industrial health facilities for small industries; and a policy on employment of those handicapped by chronic disease.

Handling epoxies

Walter F. Scholtz of Allis-Chalmers has a five-point program for proper handling of epoxy resins: 1. Mechanize the mixing. 2. Exhaust the vapors. 3. Keep the place clean. 4. Wash after exposure. 5. Provide medical treatment for dermatitis promptly.

Flying saucers

The first collisions with flying saucers were reported by an airline recently. Food service equipment inadvertently left on the ramp was hit by a strong prop wash. Plates, food scraps, cups, and saucers flew back into a line of passengers, resulting in several claims against the airline.

Waste Disposal

Researchers who work closest with chemicals are the logical men to consult when confronted with a laboratory waste disposal problem. One system reported to us is to take the research workers on a tour of waste disposal facilities to familiarize them with the problems in disposing of technology's trash.

Sensitivity and noise

The University of Pittsburgh is studying the relationship of changes in hearing sensitivity to noise levels. One unexpected result has been the indication that frequencies above 2,000 cps cause hearing impairment at noise levels previously considered harmless.

Jim Saul

LEARNING proper use of brake-clubs when applying or releasing staff and wheel brakes.

Safe Railroaders In Training

New employees learn by doing as well as by listening at the Reading's training center

AN INNOVATION in the Reading Company's employee safety training program was inaugurated April 9, 1952, when President J. A. Fisher officially opened the Training Center at the Main Station in Reading, Pa.

Previously, the training of new employees had been left to yardmasters, conductors, and other members of train and engine crews, with resulting lack of uniformity in training.

New employees reporting at the Training Center have passed the medical and rules examiners. If passed by the Training Center instructor, these workers receive two additional days of training in yard service.

The first period of instruction at the Center, which includes a full eight-hour day period, is a lecture. An instructor speaks about the merits of railroad employment, advantages of safe operating methods, equipment required in operation, and reasons why employees have been with the company for long periods. Some workers are fourth and fifth generation railroad men.

This lecture includes the self-application of railroad work and how promotions are made, particularly from fireman to engineman, and from brakeman to conductor, following through to officer promotions.

After verbal instructions, use of hand brakes is demonstrated by application and release. After the demonstration there is a full-class participation. During this time the instructor observes the performance of each member of the class, paying particular attention to stance, footing, hand grip, and other positions important in hand brake operation.

Next the instructor demonstrates the proper method of operating switches and derails, especially regarding location of the feet, avoiding contacts with the switch lever, and close observation of switch points and their function.

MOTION PICTURES supplement lectures and demonstrations in teaching new employees at the Reading Company's Training Center.

By C. K. HOCH

Superintendent of Safety, The Reading Company, Reading, Pa.

PRACTICING correct method of ascending and decending ladders and application and release of hand brakes.

PASSING hand signals on top of box car when in close contact with Hasco Bridge warnings.

FOOT PROTECTION is promoted at the Training Center and in talks and demonstrations along the line.

USE AND MAINTENANCE of fire-fighting equipment and the transportation of explosives and other hazardous commodities are covered in the railroad employee's training.

Comments then follow on an important phase of instruction—the proper method of climbing up and down end and side ladders for reaching the running boards and brake step boards.

Included in this demonstration is observance of tell-tale or bridge warnings while on the running board, the reaction of the employee while climbing up the mock-up car,

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The limelight is not for apostles of safety They have made progress in their drive for safer conditions by

Working in the Shadows

BAD AS WE ARE today, we used to be worse, relatively speaking. The safety profession has inspired achievements of near miraculous proportions in the past few years.

You safety people have the brains and ingenuity to arrest the accident trend and respond effectively. Mankind is challenging you to show the way.

Both these points—what has been done and what can be done—have one thing in common. You made the record and you can meet the challenge by "working in the shadows."

As man emerged from the era when knighthood was in flower, progressed through centuries of skilled hand craftsmanship, and embarked into the machine age, he learned that with each conquest of more powerful forces, he had unleashed greater dangers.

Higher speeds of travel and the powers that made them possible demanded new rules of conduct. But the damages to man's body and mind seemed to be focused on the products of the industrial revolution.

Consequently, crusaders dedicated their energies and resources to obtain improved lighting, better ventilation, sanitation facilities, machine guards, and dozens of other safety devices in that period of rapidly advancing mechanization of industry.

By CHARLES M. BROOKS

Director of Industrial Relations, The Texas Company, New York. Condensed from an address before the Petroleum Section, 46th National Safety Congress.

But these crusaders were not knighted by governments or praised by society; they were not in the limelight of public or private acclaim. Even then those dedicated men who preached, taught, and practiced safety principles were "working in the shadows."

As early as 90 years ago there was some organized safety inspection of factories in one state, but it was not until 66 years ago that an industrial plant established a safety department.

Yet there were apostles of safety, mostly among insurance companies and railroads, who were crying in the wilderness. They met with only token successes. However, as men were crippled, maimed, and killed; as people heard the cries of widows and orphans; as news spread of disasters in mines and factories, on railroads and ships, then more interest developed in safety and accident prevention.

No Hero's Acclaim

But those apostles of safety were not given heroes' acclaim. They had made progress in their drive for safer conditions by working in the shadows.

Just 46 years ago the National Safety Council was born in Milwaukee. It was of modest proportions compared to what we see at the National Safety Congress.

Progress since then has not been limited to attendance or membership numbers. More significantly, in 1912 there were approximately 35,000 people killed on the job in industry, and last year there were about 14,200—only 40 per cent as many on-the-job fatalities. This is a tribute, in no small part, to the quiet, effective, and appreciated but usually unheralded work of the safety men in industry.

To be specific about our own industry, in the last 30 years the on-the-job disability rate has been reduced by 75 per cent in the petroleum industry. Last year we suffered only 7¼ disabling injuries for every million man-hours worked.

About a quarter-century ago it was not uncommon for industry to assume an attitude that safety was a matter for the humanitarians but not for the business man.

Today, however, management knows that safety is a means to greater efficiency, lower costs, and higher production. Moreover, it is now commonplace for government agencies, labor unions, employees, and the public to join with industry in their safety programs.

Perhaps you are thinking "I know all this and I know that we in the safety profession are largely responsible for this progress by our efforts in educating and persuading management, employees, and others."

That is true—and your company executives and operating management know it is true.

"Well," you may ask, "why don't we in the safety departments get more credit?"

Yours is not a job that will ever bring you thunderous applause or a hero's award. Your effectiveness always has been and always will be

dependent on your ability to work in the shadows.

You know that a safety program is successful only if top management pushes it. You know the line managers must make safety an integral part of operations if the men are to work safely.

And if you think it through, you will know you must do your work quietly and diplomatically. It is my opinion that you must remain as the power behind the throne and be content never to wear a crown.

When there is no praise even where due, keep in mind Emerson's profound philosophy:

"The silence that accepts merit as the most natural thing in the world is the highest applause."

I have observed that you in the safety profession are due much credit for the remarkable progress made in accident prevention.

But our progress in industrial safety is directly due to the serious and sincere efforts of operating managers, and to the financial and authoritative support of our managements. You then represent the power that set in motion the motivating force that stimulated operating and executive managements to act in a way that improved safety.

Had there been no safety professionals there would have been no one to carry the message. Had not all levels of management and employees in groups and individually heeded the message, there would have been no improvement in our safety records.

It seems to me that by the nature of our business the service staffs, as distinguished from the operating staffs, must expect to receive less credit for the success of the business. The exploration and producing, the refining and processing, the selling and marketing, the research and improving, the transporting and shipping—these respective activities in our companies can show more tangible evidence, as a general rule, of the results that come from their expenditures of money.

On the other hand, it may take several years before a safety, health, communications, or benefit plan, or collective bargaining, or other such industrial relations program starts paying off so we can actually see the results.

The record—with which you are so familiar—shows that your working in the shadows has achieved results of astounding proportions and magnitude.

However, you are to be the researchers of tomorrow; you are being challenged to find out what we can do so we won't keep on doing what we are doing now.

If I am able to inspire you, it will be by motivating you through reminders of what you already know, not by telling you something new. Galileo once said, "You cannot teach a man anything; you can only help him find it in himself."

The Three Killers

The Council has said that traffic deaths are caused by "Indifference, Intemperance and Impatience."

Indifference is a condition produced by an operation of the intellect. I don't mean that it is always intelligent to be indifferent.

Indifference in attitude would be described by Shakespeare as "The disease of not listening, the malady of not noting." Indifference is the cousin of contempt; it is the opposite of diligence and thoughtfulness.

It seems to me that if you are to meet the challenge to the safety profession, you must first apply the intellect. It cannot be met if you are indifferent to the other problems of business operation.

The safety program must be geared in with the demands and the pressures on the business from the stockholders, the employees, the customers and the general public. Such a program cannot be devised if you are merely guessing and hoping—if you are not using your intellect.

As you know, recent studies and surveys show that our present safety gimmicks are not getting through very well to employees, drivers, pedestrians—in fact, to all people.

A recent survey by Opinion Research revealed that more than 90

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BEATNIK

WHAT's all this jazz about the no-good Beatniks?

The "beat" folks defy tradition, conformity, and authority. They indulge in frowned-on practices and excesses. They follow their own whims and follies, regardless of what others say, think or do.

Yet, the way they fuss at the status quo isn't so strange. They just do 100 percent of the time what most of us sneak around and do only when we think we might get by with it.

In fact, old *Dad* is pretty "beat" himself. He just doesn't have the guts to go all out in rebellion.

Instead of flatly refusing to work, he'll goldbrick on the job, putting out less than expected.

He fights authority by refusing to use safeguards or follow practices spelled out by the boss.

Instead of growing a beard, he just irritates the spouse by not shaving on weekends.

He defies the law by sneak speeding, when the cops aren't in sight.

He finagles on the income tax return rather than refusing to pay at all.

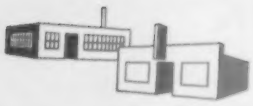
He flaunts conformity on vacations, breaking out his wildest sport shirts to wear to otherwise formal establishments.

He wears his nondescript clothing at home and in the yard to jolt the family and neighbors.

Instead of declaring himself an *artiste*, with beret and palette, he exercises his surrealistic tendencies on the recreation room wall.

As far as the "beat" philosophy goes, don't knock it unless you ain't had it.

ROBERT D. GIDEL



SMALL BUSINESS and ASSOCIATIONS

By A. M. Baltzer and John T. Curry
Small Business Program Staff, National Safety Council

Something New All the Time

The Portland Cement Association safety program dates back to the early days of industrial safety, but every year something new is added. That explains P.C.A.'s amazing no-injury record.

For example, it is launching another summer no-accident campaign based on a baseball theme. Its first autumn safety campaign in the past year, based on a bowling theme, proved that employees like the sports incentive.

The new trophy, illustrated here, for plants operating at least one-million consecutive man-hours in a calendar year and not qualifying for the large concrete monument safety trophy, is also stimulating considerable interest.

New ideas continue to pay off; 77 plants—a record number—won P.C.A. honors for completing a calendar year without a disabling injury to any employee!

Concrete Savings

Henry Toennies of the National Concrete Masonry Association illustrates how safety can boost profits with this actual case history:

A concrete block manufacturer with fewer than 50 employees realized savings of almost $35,000 during 9 years of an organized safety program, with almost $4,000 a year savings on workmen's compensation premiums alone! The NCMA *Safety Bulletin* goes on to estimate that the total savings to this company probably exceed $10,000 annually. It would take additional sales of quite a few truckloads of blocks to equal these savings!

30,000 Reasons

C. S. Stackpole, managing director of the American Gas Association, gave us a statement which more than proves that "safety pays."

> The AGA safety program was instrumental in preventing more than 30,000 disabling injuries to gas industry employees during the past 10 years.

A recent release from AGA cites the eleventh consecutive year of injury rate reduction—an all-time low of 8.07 disabling injuries per million man-hours worked.

Congratulations to our committee member, R. N. Papich, and to the American Gas Association for its continuing leadership in the association safety field.

Take a Break

Safety experts recommend that drivers and tourists, particularly those unused to long stretches of monotonous turnpike driving, stop frequently for a "rest break." We don't favor any particular type of refreshment, but are pleased that the American Bottlers of Carbonated Beverages are supporting traffic safety by urging a "soft drink break" to relieve highway fatigue.

The A.B.C.B. has helped the Council produce and distribute a special traffic safety poster recommending a soft drink break. An initial distribution of 5,000 posters is being made by soft-drink salesmen-drivers to service stations for posting on vending machines.

Wanted—Success Stories

The April 30 *Safety Bulletin* of the National Concrete Masonry Association carried a series of testimonials from winners of the 56 safety awards in the 1958 N.C.M.A. Safety Contest.

The executive vice-president of one organization said that in 1947 his firm was unable to get compensation insurance because of a bad accident experience.

In the 10 years of its safety program the firm has had so few accidents that it now recovers almost 60 per cent of its total insurance premium—and the organization's present carrier is most happy to cover it.

Do *you* know of a similar case? If so, we would like to have it for our growing file of such case histories, proving that safety pays.

Welcome New Members

Alabama Liquefied Petroleum Gas Association.

Arkansas-Missouri Ginners Association.

Associated Pennsylvania Constructors.

Automatic Fire Alarm Association.

Mason Contractors Association of America.

National Association of Amusement Parks, Pools, and Beaches.

National Furniture Warehousemen's Association.

National Ice Association.

New Brunswick Accident Prevention Association.

Quebec Lumbermen's Accident Prevention Association, Inc.

Retail Merchants Association of Baltimore.

SURE STEPS TO COMPLETE FIRE PROTECTION!

Just as a fireman's ladder must be long enough to reach the highest blazes, so should your fire protection extend to every possible hazard! The sure steps to complete fire protection require many different kinds of equipment. Now a single organization—Fyr-Fyter—can supply all the dependable, high-quality products and services you'll need! Fyr-Fyter's ladder of famous brands includes approved fire extinguishers; automatic sprinkler systems; carbon dioxide, dry chemical and foam systems; fire hose, nozzles and couplings; alarm systems; and fire department accessories, including ladders, sirens, clothing, breathing apparatus, first aid kits, etc.

To reach your goal of complete fire protection, you also surely need the deep knowledge and experience acquired by Fyr-Fyter representatives in industrial, commercial, institutional, municipal and household fields. These men are uniquely qualified to survey, analyze and recommend the proper equipment to guard every fire risk.

To contact the representative nearest you, look for Fyr-Fyter's family of brands in the yellow pages under "Fire Protection Equipment" or write to:

THE FYR-FYTER COMPANY

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Representatives and Distributors in all principal cities.

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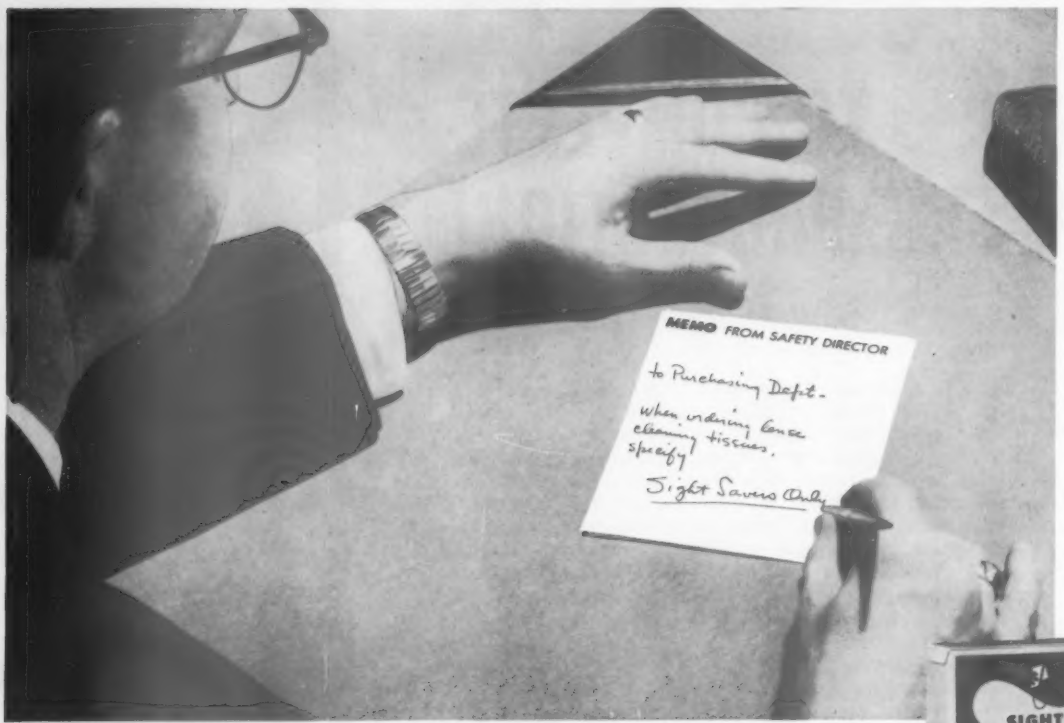
FACT: SIGHT SAVERS



The same genuine SIGHT SAVERS bought by millions at drug counters are used by workers throughout 10,000 plants.

FREE WALL DISPENSERS!

$2.50 value each . . . free with your purchase and continued use of SIGHT SAVERS

- **Strong, heavy-gauge steel . . . pilfer proof.**
- **No waste — delivers just one tissue at a time.**
- **No mess — no liquids, no bottles, no extras.**
- **Never runs out — can be refilled before empty.**
- **Easy to install — compact, only 3½" x 8" overall.**
- **Attractive colors — safety green, white or black.**

are preferred by safety directors in over 10,000 plants!

Here's what THIS FACT means to your eye safety program

Thousands of safety directors, who have tried every method known for cleaning glasses, agree: SIGHT SAVERS are the most effective way to boost eye safety in the plant. You'll agree, too, once you compare genuine silicone-treated SIGHT SAVERS with any other lens cleaners. Safety directors report workers keep safety glasses on the eyes, not on the shelf, when SIGHT SAVER cleaning stations are close at hand. SIGHT SAVERS wipe away the best excuse ever given for not wearing safety glasses.

More reasons why SIGHT SAVERS are your safest buy

- Treated on both sides with *twice* as much silicone as other tissues . . . do the best job of cleaning and polishing.
- Nationally advertised; known, preferred and purchased by millions of satisfied users. You don't have to "*sell*" workers on using SIGHT SAVERS . . . your employees are already *pre-sold.*
- Endorsed by leading opticians . . . meet Federal specification UU-P-313d for lens cleaning tissues.

NOW *—new lower prices for* ***SIGHT SAVERS . . .***
check with your safety distributor*

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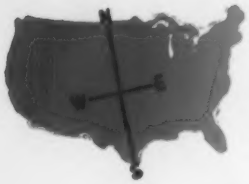
AROUND THE COMPASS



ACTIVITIES
• PROGRAMS
• EVENTS

By Nils Lofgren
Field Service Department, NSC

Managers Attend Regional Meetings

The 1959 regional meetings of council managers have been completed. The first gathering was held at the Southern States Safety Conference in Asheville, N. C., on March 1. The fourth meeting was in New York City on April 13. A total of 32 managers attended, in addition to NSC headquarters and field personnel.

The chairman of each meeting was the regional chairman of the Conference of State and Local Safety Organizations:

Charles Hopkins, managing director of the West Virginia Safety Council, for the Southern group;

William Feathers, managing director of the Seattle-King County Safety Council, for the Western region;

George Burns, managing director of the Kansas City Safety Council, for the Midwestern states; and

Harold Seward, secretary-treasurer of the Lehigh Valley Safety Council, for the Eastern region.

Safety Briefs

The Ladies Chapter of the Izaak Walton League in Sioux Falls, S. D., recently conducted a course in safe handling of firearms. The South Dakota State Department of Game, Fish and Parks and the National Rifle Association furnished materials and subject matter.

The Western Pennsylvania Safety Council is now in new quarters at the First Federal Building, 600 Grant Street, Pittsburgh 19.

On April 8, 15, and 22, the Greater New Haven Safety Council sponsored the First Annual Supervisors' Safety Training Course in the Connecticut city.

A Foremen's Safety Institute was conducted by the Industrial Committee of the Hudson County (N. J.) Safety Council on May 20.

At the morning session Frank A. Debernardis, coordinator of training, Esso Standard Oil Co., N. Y., discussed "Building Safety into Job Placement, Instruction and Training." The luncheon speaker was Dr. Donald G. Livingston, assistant director, Laboratory of Psychological Studies, Stevens Institute of Technology, Hoboken, N. J., who talked on "The Psychology Behind Communications."

Charles E. Grunder, assistant superintendent, Hyatt Bearings Div., General Motors Corp., Clark, N. J., was the afternoon speaker. His topic was "Employee Safety Training—The Supervisor's Point of View."

A PROPOSAL to use car-top signs to promote safety as well as political candidates was considered in April at a Wisconsin Council of Safety board of directors meeting at Fond du Lac. Demonstrating a sample sign are Leslie Mangin (left), Manitowoc, state council president, and Edwin Slavik, president of the Fond du Lac Industrial Safety Council.

Field Service National Safety Council

Headquarters: 425 North Michigan Ave., Chicago 11. George W. Harris, manager; Noble Dutton, assistant manager; Joseph Lovvorn, finance advisor; Nils Lofgren, program consultant.

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5. James E. Civils, 811 E. John Wesley Ave., College Park, Ga. Ph: Poplar 7-9230 (Fla., Ga., N. C., S. C.)
6. George T. Simmons, 3717 Gaston Ave., Montgomery, Ala. Ph: AM 5-6890 (Ala., La., Miss.)
7. James D. Hill, 3276 Darvany Dr., Dallas 20, Tex. Ph: Fleetwood 1-6609 (Texas)
8. Evett N. Allen, 200 Cliffdale Rd., Nashville 14, Tenn. Ph: Tucker 3-7293 (Ark., Ky., Tenn.)
9. Philip N. Streit, 10418 Reeds Drive, Overland Park, Kan. Ph: Niagara 8-3636 (Kan., Mo., Okla.)
10. Harold J. Holmes, 125 Chase St., Bartlett, Ill. Ph: Tennyson 7-3703 (Ill., Ind.)
11. Norman A. Olman, 2630 Oakwood Dr., East Grand Rapids, Mich. Ph: Cherry 3-5235 (Mich., Ohio)
12. Robt. M. Sorensen, 1648 Deane Blvd., Racine, Wis. Ph: Melrose 3-7380 (Minn., Wis.)
13. Hal Kent, 4909 S.W. 18th St., Des Moines 15, Iowa. Ph: Atlantic 3-1476 (Iowa, Neb., N. D., S. D.)
14. Robert D. Hopper, 6348 Teller, Arvada, Colo. Ph: Harriston 4-1383 (Ariz., Colo., N. M., Utah, Wyo.)
15. Alton P. Bunderson, 6505 Fairfield St., Boise, Idaho. Ph: 4-4647 (Idaho, Mont., Ore., Wash.)
16. John C. Hall, N.S.C., 703 Market St., San Francisco 3, Calif. Ph: Exbrook 2-0945 (Calif., Nev.) (Res: 309 So. Ashton, Millbrae, Calif. Ph: Oxford 7-8382)
17. Vincent R. Gallalee, (Headquarters) (Field Finance) Res: 7351 North Seeley, Chicago 45. Ph: Broadway 4-1445.

Circle Item No. 13—Reader Service Card ⟶

Here's why Iron Age Leads in Value

All Iron Age safety shoes are high styled. Their smart lines attract workers; make them want to wear *these* safety shoes . . . boost coverage.

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Iron Age sales and service representatives are located in all key industrial areas of the country. Why don't you call yours now for an eye-opening showing? He's as near as your phone, or write us and he will see you.

Iron Age SAFETY SHOES

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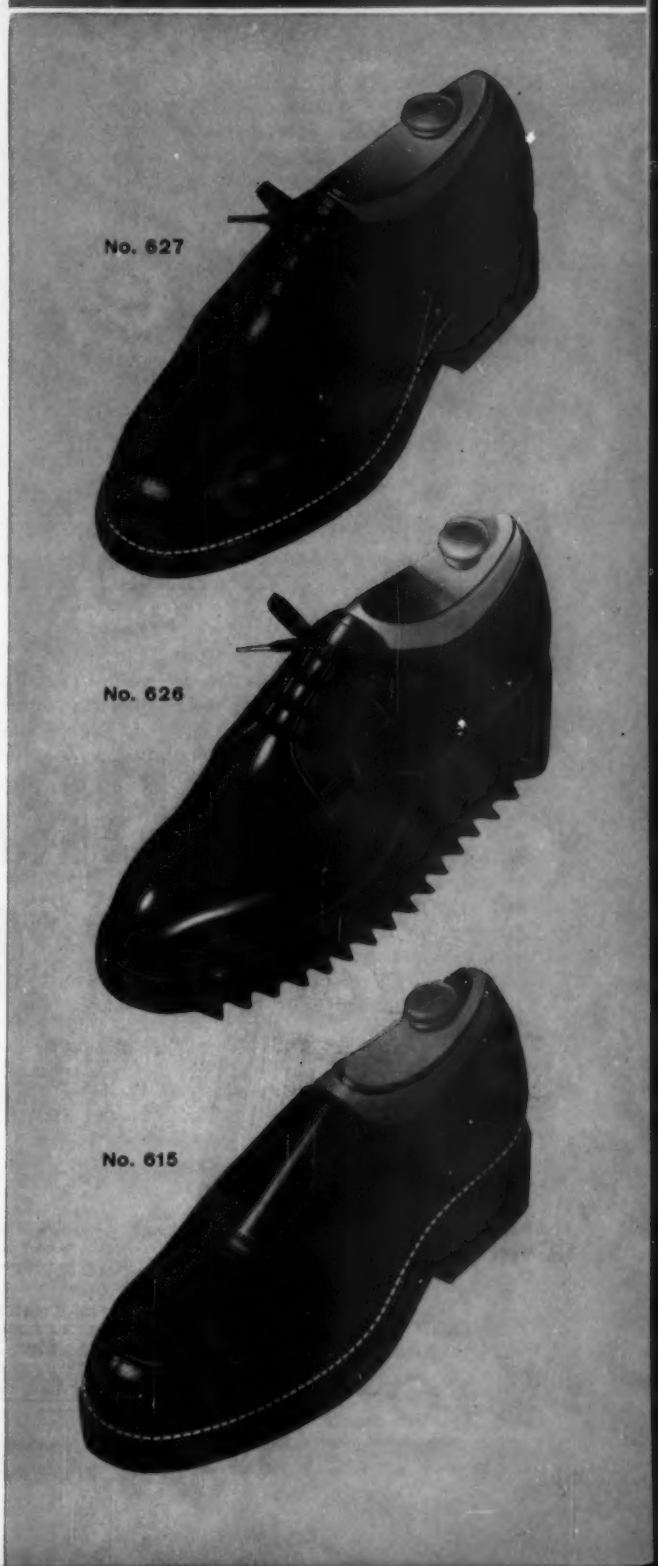
3 OF THE MANY DISTINCTIVE STYLES



Safe Railroaders

—From page 43

the position that must be taken on the car roof for passing hand signals, and setting retaining valves on the ends of cars.

The next phase of instruction covers coupling and uncoupling of air hoses, signal hoses, and steam hoses. These are mounted on a hose rack in the same positions as this gear is found on cars. The demonstration is conducted with the same air pressure as in normal service.

At the completion of this part of the training, two safety films are shown. These are *Stop-Look-Listen* and *Safety at the Cross Roads*, both produced by the Reading Company.

After the film, a lecture and demonstration covers the handling and placing of placarded cars in yards and terminals and on the road, stressing the significance of cars marked EXPLOSIVE. The function of the Bureau of Explosives is explained, as is the relationship of this organization to all railroads in the United States, Canada, and Mexico.

The lecture then deals with the use of fire-fighting equipment carried on locomotives and cabooses, including hot-box fire extinguishers.

Next, the lecture concerns the use of hand signaling equipment, such as lamps, torpedoes, fuses, and various types of flagging equipment.

Also included in this phase of the lecture are the advantages of protecting the feet with safety shoes. This program stays active along the Reading line through periodic talks and demonstrations accompanied by a mobile safety shoe unit.

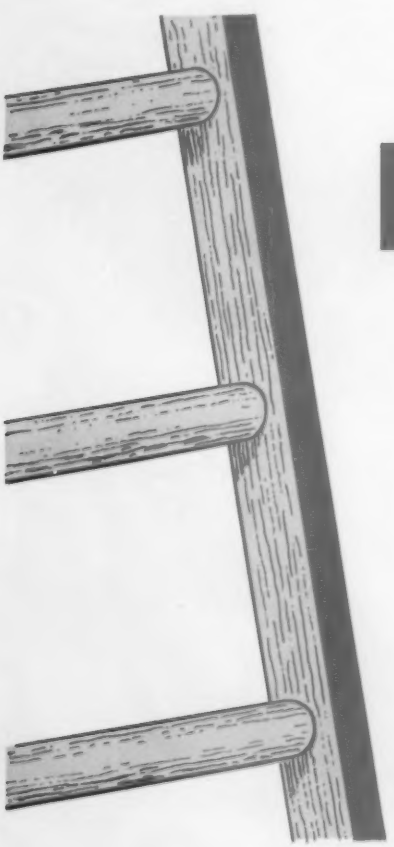
At completion of the course, employees take a written aptitude test. Questions involve instruction given during the eight-hour period. A worker's written answers to questions and his reactions during demonstrations enable the instructor to determine an employee's aptitude for train and engine service.

At the end of the day's instruction in the Training Center, each graduate receives a card showing he has passed the tests. He is given copies of Reading Company's *Safety Rules, Rules for the Government of the Operating Department, Air Brake Instructions, Hand Brake Manual*, and other literature.

Since the opening of the Training Center, 1634 workers have passed the examination, while 176 (approximately 10 per cent) failed to meet requirements for employment.

The Training Center has expanded to include further training of supervisory personnel in other departments, such as train service, mechanical, and maintenance of way. An added function is the retraining of older train service employees involved in railroad or outside property damage accidents. These are known as *penalty classes*.

To date, 742 such employees have gone through reinstruction courses. Some of these men were veterans of 30 or 40 years of railroading. Only 14 have had to go through a second course of reinstruction.



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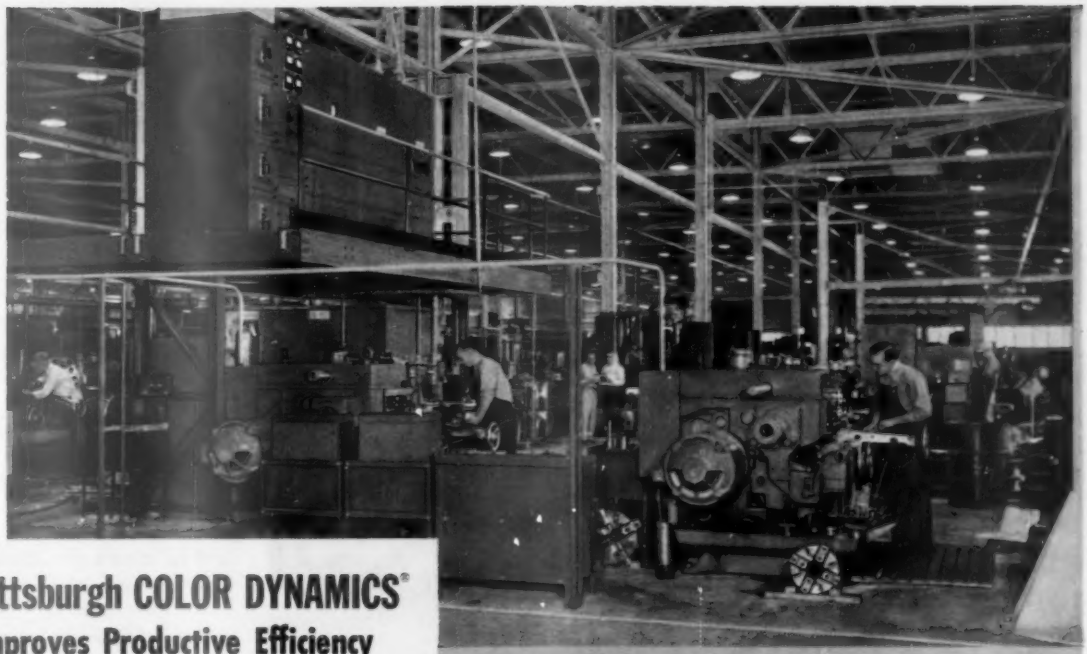
Circle Item No. 14—Reader Service Card

Circle Item No. 15—Reader Service Card



Pittsburgh COLOR DYNAMICS® Improves Productive Efficiency in New Blaw-Knox Factory

New painting system relieves eye strain, reduces fatigue and provides greater safety for workers in modern road-paving equipment plant at Mattoon, Illinois.

BLAW-KNOX

THE NEW Blaw-Knox plant at Mattoon, Illinois, is another convincing example of the improvement in productive efficiency, safety and morale resulting from the use of Pittsburgh COLOR DYNAMICS.

● **This plant is devoted** to the manufacture of road-paving equipment—concrete pavers, spreaders, mixers, finishers, bituminous paving machines and road wideners. The 300,000-sq. ft. structure was designed by Sverdrup & Parcell, Inc., St. Louis, Mo., architects, and erected by the George A. Fuller Company of Chicago.

● **The interior** of this entire plant was painted according to the principles of COLOR DYNAMICS. The beneficial effects of this painting system are summarized in this comment by A. J. Cox, general manager of the Blaw-Knox Construction Equipment division:

● **"We selected colors** for interior walls and ceiling to create more cheerful surroundings for our workers. Stationary as well as moving parts of machines were painted in colors that help operators see their jobs better. Eyestrain is relieved. Nervous tension and physical fatigue are reduced. Safety colors mark hazard areas and safeguard workers against dangers of time-loss accidents.

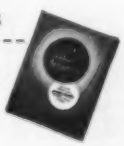
● **"Our experience** since opening the plant confirms our judgment that properly planned colors are a boon to management and workers alike. They are an aid to greater productivity. The pleasant environment enhances morale. Our entire work force takes pride in our plant's appearance. Work areas are kept clean, simplifying housekeeping. The cheerful and pleasing appearance helps us to recruit new employees in an area where skilled labor has been hard to get. And we enjoy all these benefits at no greater cost than conventional painting."

● **This new Blaw-Knox plant** is only one of thousands of factories in which productive efficiency has been improved by the use of COLOR DYNAMICS. Try it in your plant—in a department or on a machine or two—and see the difference it makes.

Let us Make a Color Plan of Your Plant—It's FREE!

● We'll be glad to mail you a free copy of our fully-illustrated book on COLOR DYNAMICS for industry. It explains what this painting system is and how to use it. It contains scores of practical suggestions. Better still, we'll be glad to prepare a comprehensive color plan of your factory, without cost or obligation. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our representative see you. Or mail coupon at right.

Send for a Copy of this FREE Book



Pittsburgh Plate Glass Co., Paint Div.,
Department NSN-60, Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your booklet "COLOR DYNAMICS."

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HELP US KEEP THE THINGS WORTH KEEPING

This is Commander W. R. Anderson of the Nautilus, world's first atomic-powered submarine.

Working day after day in the first line of America's defense force, he sees the need for peace firsthand—knows that it's a matter of life or death. And he knows, too, that peace doesn't come easy or cheap. Peace costs money.

Not only money for strength to keep the peace. Money for science and education to help find lasting peace. And money saved by individuals, to keep our economy sound.

We can't all be Sub Commanders. But we can all help strengthen America's Peace Power, simply by buying Bonds for a stronger, safer America. Every Bond you buy helps.

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HOW YOU CAN REACH YOUR SAVINGS GOAL WITH SERIES E SAVINGS BONDS

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If you want about	$2,500	$5,000	$10,000
each week save	$4.75	$9.50	$18.75

HELP STRENGTHEN AMERICA'S PEACE POWER

BUY U. S. SAVINGS BONDS

The U.S. Government does not pay for this advertising. The Treasury Department thanks The Advertising Council and this magazine for their patriotic donation.

LOOK *for improvements in industrial handcleaners*

A NEW WAY to clean working hands

There has never been such a combination of *plus* features to keep workers' hands healthy—and therefore on the job day after day!

It's a brand new scientific formulation — non-depleting Lan-O-Kleen *PLUS*.

It's WEST'S famous Lan-O-Kleen handcleaner . . . *plus* a softer scrubbing action . . . *plus* a gentler sudsing action . . . *plus* a soothing lanolin action!

All of which combine to combat the depletion of natural skin oils while hands are being washed clean.

Highly important is the exclusive process that keeps the rich lanolin content of Lan-O-Kleen *PLUS* "free" to soothe and soften. Lanolin is impregnated into a corn meal base, instead of being "held" in the soap by conventional methods. In this way, it is instantly released for more positive, beneficial action.

Lan-O-Kleen *PLUS* is dispensed from a patented, precision-action unit. A clog-proof measuring valve with a mechanical agitator delivers a thrifty, yet adequate individual portion. More than 435 pairs of hands can be washed with each dispenser filling.

FREE TRIAL OFFER. We'd be glad to send five pounds of Lan-O-Kleen *PLUS* and loan a dispenser for free trial. Or we'll send a smaller sample for evaluation. Just call your local WEST office. Or mail the coupon to our Long Island City Headquarters, Dept. 3.

☐ Supply a dispenser and 5 lbs. of Lan-O-Kleen *PLUS*.

☐ Send a small sample of Lan-O-Kleen *PLUS*.

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Position_____

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FOR PROTECTIVE SANITATION
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Circle Item No. 16—Reader Service Card

OFF THE JOB

Safety programs for plant and community

By HARRY C. JOHNSON

NSC Staff Representative, OTJ Safety Committee

BOATING is big business. It touches a good percentage of U. S. workers and their families in off-the-job activities. *Milwaukee Sentinel* reporter Jim Bishop, feeling a need to urge increased boating safety and nautical know-how, devoted a feature to this subject. Here are his comments:

* * *

He said he'd give the kid a tow, and they hooked up the water skis and the man opened the throttle. The 50 horses yanked the kid up out of the Delaware . . . He flew upstream . . . Then, dead ahead the man saw the big rusty pipe sticking out of the water.

He swung hard left . . . The man fell out and grabbed the gunwale and hung on. The boy fell off the skis. The man was dragged in swift circles. When he let go, he swung under the stern, and the propeller—turning at 4,000 rpm.—sawed him across the waist. He just disappeared.

At almost the same time, less than 100 miles away a boy in an outboard skimmed across Upper Greenwood Lake. He was moving pretty well and waved to some girls on the beach. He didn't see the rented boat coming across his path from the right. The boy's boat climbed across the other one.

In it were a mother and four children. It was surprising that all except the seven-year-old girl got to shore. They had to drag for her body.

Boating is now a major sport in the U.S. There are currently 7,330,000 water craft from big steam yachts down to 7-ft. prams. Most of the pilots on the seas and rivers and lakes are careful and considerate. But, if only 1 per cent of them are reckless, we are faced with 73,000 potential killers.

Most of the 5 million small outboard boats do not require state licenses. At least half of these are run by teen-agers. Of these, at least 25 per cent are too young to get automobile licenses.

In the exuberance of extreme youth all they ask of a boat is speed. The fact that they are not required to get licenses is like saying that certain guns do not need licensing because the bullet they fire is small.

Many who operate rented boats are the worst offenders. Men unqualified to pilot a toy sailboat in a bathtub go out loaded with bait, burgers, and booze. The more they drink, the braver they become.

People who own a boat, and fathers who study the rules of piloting and safety, get in the habit of staying home on week-ends. The water is dangerous at that time.

The nation spent more than two

—*To page 91*

Mr. B. C. Krauter
Landscape Engineer
Brunswick, Me.
Dear Mr. Krauter:

Thanks for your letter about power mower safety. It will probably do more to stimulate interest in power mower safety than all the facts and statistics I could present in many years.

The flood of letters received, pro and con, have at least got the grass-cutting public thinking about the hazards involved. They have also proved to me that the Off-the-Job page is being read. We often wonder what people think after reading these articles. Letters from readers are one way to find out.

Your letter is challenging, and if some folks haven't seen it, it's on page 6 of the May issue. The article to which your letter refers was on page 81 of the April issue.

Sincerely,
Uncle Harry

POSTED speed limits should be obeyed. They are usually found in narrow channels or other situations where crowded conditions would make speeding dangerous.

SAILING courtesy demands that powered craft operators give small boats a wide berth and proceed slowly. Flat-bottomed build of rowboats causes them to tip easily.

Put PROVED dependability into interior FIRE ALARM systems!

You can provide today's *best* fire alarm protection for any industrial, commercial, or institutional building with a Gamewell FLEXALARM System. Thoroughly pre-engineered by the fire-protection professionals who developed the familiar "pull" fire alarm box, it assures the same unmatched efficiency and dependability *inside* buildings.

Precisely tailored to each installation, FLEXALARM is available as a coded or non-coded system, semi or completely automatic, with practically limitless possible combinations of annunciators, special drill, test, and alarm features. For example, it can be tied into the municipal alarm system at the curb; integrated with the sprinkler system; or automatic fire detection devices.

FLEXALARM is designed for unit-by-unit expansion depending on specific life hazards, fire defense plans and the growth of your plant. It's simple to specify, easy to install, efficient and economical. Gamewell will be happy to assist with fire detection engineering of new construction, expansion, or modernization, if desired. It's a service that gives you the benefit of over 100 years' experience with fire protection systems. Specify Gamewell . . . single source for engineering assistance and complete product line . . . maximum protection at minimum cost. Write THE GAMEWELL COMPANY, Dept. 6A, Newton Upper Falls 64, Mass.

Gamewell

FIRST...WHEN SECONDS COUNT

Circle Item No. 17—Reader Service Card

Slides Add Punch

—From page 27

of good housekeeping, newly installed guards, and general improvements in plant conditions.

Fire protection is included along with accident prevention in the program.

Photographs are taken by members of the personnel department, using 35mm cameras, Ektachrome film, and flash. Because picture surveys are part of routine daily plant inspections, and because pictures are often needed at once, members of the department are always ready to shoot.

Few hazards are staged deliberately. Most of those photographed are the result of someone's failure to pay attention to seemingly minor details. So the safety department seeks to maintain a constructive rather than a critical attitude. These circulating cameras have had a far-reaching effect.

The program seems to help in building departmental spirit and a healthy competitive feeling. Foremen realize the picture program is to promote safer conditions, not to fasten blame on anyone.

Color photography has contributed immensely to the effectiveness of visual aid programs. Color slides have life and realism, making the message more impressive and easy to remember.

Slides are used freely in talks to new employees. After a general discussion, a foreman or supervisor instructs the new men in more specific safety measures for their jobs.

Foremen also give five-minute safety talks at regular intervals to employees in their departments. It has been found that the foreman's enthusiasm for the meetings he conducts and the worker's interest in these meetings are almost a direct reflection of interest in management and supervisory monthly meetings.

As for results, General Motors has been a 12-time winner of the National Safety Council's Award of Honor. And Rochester's two GM divisions, including Delco, have been up among the leaders of the corporation's 35 divisions.

"Color pictures definitely have added punch to our safety efforts," says Mr. Bense.

Savings in Sanitation

American industry could save $400 million annually on sanitation, according to Albert J. Burner, president-elect of the Institute of Sanitation Management and supervisor of cleaning standards for The Port of New York Authority.

This saving could be effected, if management would stop treating industrial sanitation as a stepchild and adopt it as a permanent and important part of the management family, said Mr. Burner, speaking before the New York Chapter of the Institute. He listed these functions of the sanitation administrator:

1. Control over the approval and use of materials and equipment.
2. Study, provision, and dissemination of standards methods.
3. Training of workers in standards methods.
4. Efficient and fair allocation of workloads.
5. A clear definition of when, where, and in what order the work is to be performed.
6. Adequate follow-up or inspection to see that appropriate methods have been employed and that workloads, as allocated, have been met.

UtiliPort
lightweight army-type
folding stretcher

WEIGHS ONLY 7 1/4 LB . . .
SUPPORTS MORE THAN 400 LB

Of aircraft-type aluminum tubing and V.I.N. (vinyl-impregnated nylon) construction, MSco UtiliPort is the *modern answer* to many stretcher needs. Rigid, aircraft-type aluminum tubing . . . light in weight, yet extra strong . . . fireproof, noncorrosive, easy to clean . . . comfortable plastic hand grips. V.I.N. bed is long-lasting either under heavy usage or lengthy storage. Unaffected by moisture, mildew, or rot . . . resistant to aromatic and acid gas . . . flame-resistant, cold-resistant, colorfast. Economically priced . . . lets you place stretchers at *all* strategic locations for on-the-spot care of the injured. Takes only 37" x 3" storage space . . . choice of fabric carrying pouch or metal wall case.

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Contact your nearest MSco distributor, or
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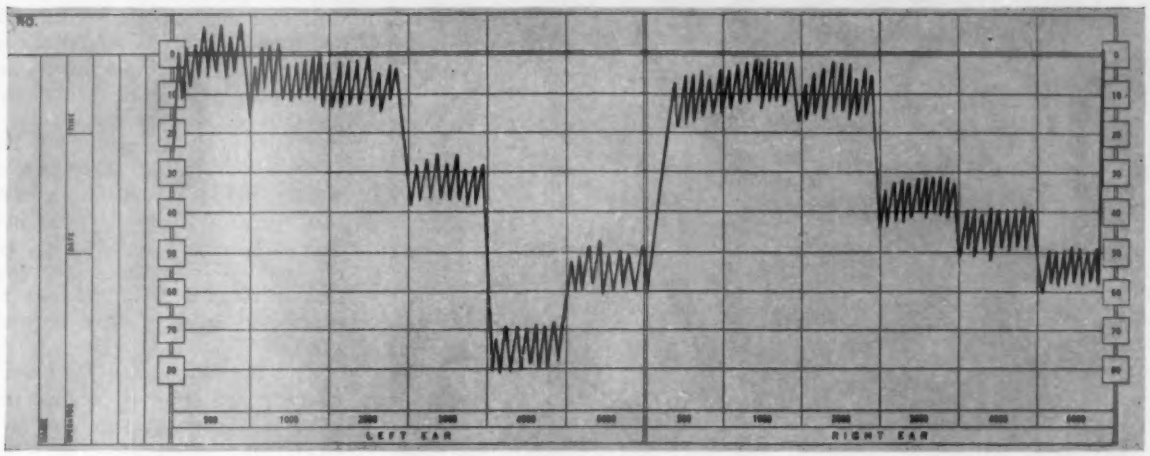
Circle Item No. 18—Reader Service Card

This simple chart can save you money



It's an Audiogram

something every alert management has for protection of itself and employee against industrial hearing loss

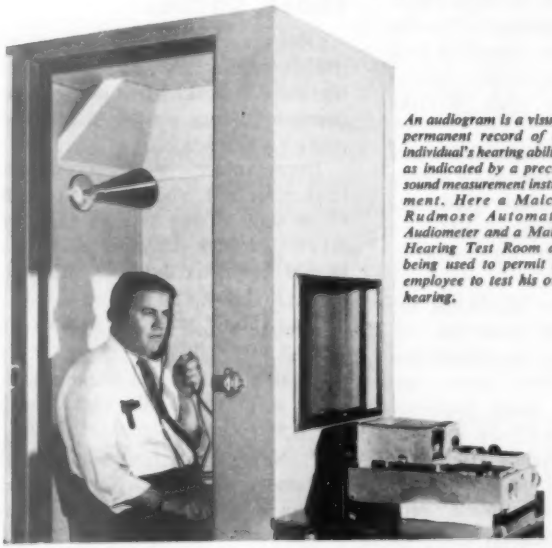
Accurate audiometric tests at the time of employment, and periodic retests, are fast becoming a *must* for industry.

A precise and acceptable record of an employee's hearing ability can be the means of preventing thousands of dollars worth of hearing loss claims. When employee hearing tests are conducted on a Maico audiometer, the possibility of challenge is minimized.

Among audiometer makers, Maico is the world leader. In fact, more than 90% of the hearing tests made in America are made on the Maico precision audiometers.

Maico offers a wide variety of models, ranging from a pocket-type audiometer for in-plant hearing checks, to automatic audiometers where the testing load is heavy. Each instrument is designed for accurate testing and easy operation by a plant nurse or member of the personnel department. A Maico consultant can recommend the model which is best suited to your needs, and can readily train a staff member in its use.

Write today for a valuable free booklet, "Ears and Industry," which tells how an industrial hearing conservation program can be set up in your plant.



An audiogram is a visual, permanent record of an individual's hearing ability, as indicated by a precise sound measurement instrument. Here a Maico-Rudmose Automatic Audiometer and a Maico Hearing Test Room are being used to permit an employee to test his own hearing.

MAICO ELECTRONICS, INC.
MINNEAPOLIS 1, MINNESOTA

ATTACH COUPON TO YOUR COMPANY'S LETTERHEAD

TO MAICO ELECTRONICS, INC.
Room 877, 21 North 3rd Street,
Minneapolis 1, Minnesota

Please send free booklet, "Ears and Industry."

Name_____

Company_____

Address_____

City_____ State_____
(zone)

Circle Item No. 19—Reader Service Card

SAFETY WORK HANDICAPPED. Military installations in many parts of the world have found local customs sometimes conflict with western ideas of safe working clothes and work practices. Another problem is the widespread fatalistic attitude toward accidents. But progress is being made in spite of handicaps.

Safety Wins Friends For U.S. Cause

FORTY-SIX THOUSAND foreign workers in nine countries on three continents look to the U.S. Army Engineer Division, Mediterranean, for their jobs and their safety.

Engaged in heavy construction activities on military projects, these native workers make safety efforts unusually complex. For instance, consideration has to be given to their psychological outlook, clothing, dialects (25 languages), and even to religious dogmas and local customs.

Mixed methods of work range from use of high-powered trucks, tractors and cranes to primitive types of hand tools, wielded as in Biblical times. It's common to see concrete from a transit mixer carried in pans on the heads of workmen climbing ladders to the site of the pour. And it's not out of the ordinary to see water carried in goatskins to wet newly placed concrete.

Loaded trucks frequently must move slowly through herds of donkeys, ponies, camels, and oxen used as added transportation. A modern type of material hoist may be operating in one area, while a human chain—formed to pass material from hand to hand—is working at another site.

In Africa and Asia thousands of undernourished, illiterate, inexperienced workmen, with bare feet often hobbled by the sheetlike skirt they wear, create hazards through childish curiosity and fatalistic attitudes toward danger. Their complete lack of awareness to unfamiliar operations around them adds to risks already present.

Most native supervisors view attention given to safety with astonishment. Such departure from age-old disregard for human life and suffering is difficult for them to understand.

In spite of these handicaps the Corps of Engineers, with the cooperation of American contractor personnel and a few native employees, has made many improvements in job safety.

By the Performance Indicator formula for computing the effectiveness of accident prevention programs, the Chief of Engineers can show that in 1958 the Mediterranean Division bettered its accident prevention program more than any other Corps' division.

Comparing accident records for 1957 and 1958, 16 employees of Mediterranean Division projects are alive today as a result of improvements in accident prevention.

This is notable, because the Division's 97.4 million man-hours of work in 1958 was four times greater than the average for a Corps' division and, because of extensive use of hand labor, included 34.9 per cent of all man-hours worked by contractors in the Corps' 12 divisions.

The Mediterranean Division's safety record also has political significance, as it involves an area 5,000 miles wide and 1½ times the size of the United States.

Winning the friendship of the people of a host country brings a valued ally, also important facilities built by the Corps.

Through its accident prevention program this division has demonstrated to thousands of workmen in foreign lands the high regard Americans have for human life and values.

Recognition of the part played by human factors in American life has made thousands of converts to safety overseas. Consequently, safety has greatly enhanced our unity with those with whom we are fighting Communism in a worldwide struggle.

Be Careful with Those Bottles

Glass is a very permanent material; it neither rots, rusts or disintegrates. A broken pop bottle could cause a serious cut 50 years from now.

Every piece of useless glass, broken or not, should be disposed of in such a way that it can hurt no one. Every stray piece of glass should be picked up and put where it can do no harm.

Two simple rules will reduce the broken bottle hazards:

1. If a bottle has a broken neck, place it in the bottle rack upside down with the broken edge down.

2. Never throw bottles in a trash container. They are likely to get broken and injure those disposing of the trash.

MR. FRANK B. GRISWOLD, *Vice President-General Manager*, LEHIGH SAFETY SHOE COMPANY, *Emmaus, Pa.*

"Thanks to neoprene soles, our Lehigh Safety Moccasin is a *2-in-1 shoe* for shop and office"

As Mr. Griswold tells it, "The Lehigh Safety Shoe Company is highly enthusiastic about a new safety-toe moccasin which has been designed for double duty in shop and office. The new moccasin has already become a big hit with supervisory personnel." Mr. Griswold attributes much of this popularity to specially treated neoprene soles. These soles not only have dress shoe styling, but also provide the same long-wearing qualities found in other Lehigh safety shoes.

To illustrate neoprene's durability, Lehigh can cite the case of a plant engineer of a cement mill who wore a pair of Lehigh neoprene-soled shoes for 7 years. During this time, the original soles have been exposed to grease, oils, water, snow and abrasive cement, and have never had to be replaced!

Experiences of this nature explain why Lehigh has now used neoprene soles for 20 years. Today, neoprene is used in their leading work and safety shoe lines. You, too, will find the neoprene sole a lasting sales asset . . . providing longer wear and customer satisfaction. E. I. du Pont de Nemours & Co. (Inc.), Elastomer Chemicals Dept. NS-6, Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.

NEOPRENE SYNTHETIC RUBBER

Better Things for Better Living . . . *through Chemistry*

Circle Item No. 20—Reader Service Card

Need More Knowledge About Toxic Exposure

Need for more toxicologic research to help protect the growing number of workers exposed to potentially dangerous industrial chemicals was stressed today by Dr. David E. Price, assistant surgeon general of the U. S. Public Health Service. Speaking before the American Conference of Governmental Industrial Hygienists, Dr. Price said:

"We believe that a first step is basic research to develop more efficient methods of toxicological evaluation. One such need is for the development of adequate testing procedures to permit prediction with greater accuracy of the effects of long-term exposures. Also needed are diagnostic procedures which, when applied to man, will detect changes long before permanent change has occurred."

Dr. Price reported that the Occupational Health Program of the Public Health Service has recently begun work in this field of preventive industrial toxicology. "The research which resulted in the discovery that vanadium poisoning can be detected by changes in the fingernails long before any clinical symptoms appear is the first fruit of a program that we hope will yield many other equally valuable findings in the coming years," he said.

Dr. Price emphasized that better application of existing knowledge can accomplish much even now. A study of Public Health Service hospital personnel exposed to x-ray and other sources of radiation showed a significant reduction, following initiation of a film-badge monitoring service, he said. In a six-month period, there was a decrease of needlessly large exposures from 31 to 3.

In considering needs for future activity in the fields of environmental health, Dr. Price referred to the published Hearings of the House Subcommittee on Appropriations, released April 24. In these hearings, Surgeon General Burney of the Public Health Service had stated:

"In the present stage of thinking, it would seem desirable to establish some centers where orientation would be to particular problems of man in his environment and where research and studies of a specific type of community or industry, or environmental contaminant or influence could be carried out. Within these centers, technical assistance could be made available and training could be given in support of the total public health effort of the various components of the Service and of the states . . .

"Our planning for expansion of program and facilities at Cincinnati in sanitary engineering, air pollution, occupational health, toxicology and radiological health is quite advanced. We do not believe that all of the PHS needs in these fields can be met at one geographic site; nor that the total needs of the nation should be met in federal governmental facilities. It will therefore be prudent to plan for eventual development of a number of centers, utilizing, where feasible, established educational and research organizations."

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So many men in industry have told us a Koolpad is a life-saver around the house, that we are again making this free offer.

Your Koolpad is a lightweight, cellulose sponge sweatband. Dampened in water, it soaks up perspiration and stops those trickles of sweat that streak your glasses or blur your vision. At the same time it provides a refreshingly cool effect. And there's never a laundry bill with your Koolpad . . . just rinse it out in seconds, and use it again.

You've probably heard about Koolpads before. They are primarily for industrial plant workers. High absorbency and refreshing cooling prevents frequent hot weather stops for "brow mopping." Koolpads pay for themselves in labor savings. But so many people have asked for personal Koolpads we've decided to make this offer again.

Write today for your personal free Koolpad.

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Improve workers' safety . . . health . . . comfort . . . efficiency

VANO DESIGN "A" VENTILATOR is used here during repairs to a chemical still. This type ventilator is used to ventilate tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments, fuselages and other confined places. Uses 8" diameter flexible canvas tubing ("Ventube").

VANO DESIGN "B" VENTILATOR here discharges welding fumes from double-bottom compartment in naval vessel under construction. Large volume of air handled quickly expels fumes and results in good ventilation. Vano Design "B" can pass through opening only 14" in diameter. Uses 8" diameter flexible canvas tubing ("Ventube").

VANO DESIGN "C" VENTILATOR here withdraws fumes from a reactor kettle. This ventilator can be furnished with 8" suction inlet for 8" non-collapsible suction tubing — or multiple inlet nozzles for 5", 4", and 3" suction base. The discharge may be connected to 8" "Ventube." Capacities furnished on request.

NO. 2 AEROPLANE HEAT KILLER here directs cool, fresh air on worker in drop forge plant. Heat killers restore workers' efficiency by providing extra ventilation in the hot months, or on any job where workers are continually or periodically required to work in excessive heat. Available in two types, three sizes in each.

VENTAIR DESIGN TE-4 VENTILATOR Gasoline Engine Driven, here delivers air into underground manhole. These ventilators provide fresh air to men in confined places, promoting safety, comfort, and increasing efficiency. Ideal where no electric current is available. Delivers 1700 CFM of fresh air. Uses 8" diameter flexible canvas tubing ("Ventube").

PORTAIR NO. 4 BLOWER EXHAUSTER exhausts fumes resulting from soldering, welding, tank coating, is also used in ventilating small tanks. It is designed to permit attachment of 4" flexible metal hose. Capacity: 425 CFM free air.

ATTACH THIS COUPON TO YOUR COMPANY LETTERHEAD

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Please send me information on supplying fresh air to men working:

- ☐ in tanks, tank cars, drums, etc.
- ☐ in underground cable manholes
- ☐ in aeroplane fuselages, wings, etc.
- ☐ on coke ovens
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COOLING:

- ☐ motors, generators, switchboards
- ☐ wires and sheets
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- ☐ exhausting welding fumes
- ☐ stirring up stagnant air wherever men are working or material is drying
- ☐ drying of walls, sheets, etc., after treated with coating material

Name .....

Company .....

Address .....

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Write here any special ventilating problem you may have { _____ _____

Circle Item No. 21—Reader Service Card

Keeping a Weather Eye Open

A tornado alert finds this Kansas City plant prepared to shelter 4,000 persons

TORNADO LOOKOUT on roof of Westinghouse jet engine plant, Kansas City, Mo., during tornado drill. There is direct telephone contact with plant protection headquarters.

AT 10 O'CLOCK on a morning early in April, whistles, bells, and gongs began sounding an evacuation signal throughout the vast Westinghouse jet engine plant in Kansas City, Mo.

Immediately, 4,000 persons left their workplaces and walked downstairs to the basement corridors. In addition to Westinghouse personnel, there were employees of the Internal Revenue Service and the Navy Purchasing Office, all quartered in the same building.

Six minutes after the signal, production, testing, and office areas were deserted. It was believed to be the first full-scale tornado drill in the area. Everything worked smoothly, although evacuation took one minute longer than officials had hoped.

The only *casualty* of the operation was a young woman, a government employee who fainted in the crowd. In less than 20 minutes all workers were back at work.

With a plant of more than 60 acres under one roof, considerable planning was needed to insure quick, orderly evacuation. Evacuation routes presented a serious problem.

The two-story office building at the front was considered the most vulnerable. Only two stairwells are available to carry more than 600 employees into the corridors beneath the production areas.

SHELTER during tornado drill. Employees follow evacuation routes to 20-foot-wide basement corridor at Westinghouse jet engine plant.

For the production area there are 10 stairwells. Workers in the test cells, forge shop, and blade casting department in a separate wing at the north end of the building must walk several hundred feet to their designated corridor.

Distances were measured and timed. Routes for employees in each sector were designated. Detailed instructions were issued for the drill.

Heart of the system is the plant protection headquarters in the southwest corner of the basement. Here a radio is on at all times to catch any storm warning.

When a tornado alert is announced, two plant guards go to the roof and observe the sky with binoculars. If they see anything dangerous, they are the ones to activate the alarm.

Westinghouse officials believe there is time to act when the watchers on the roof spot danger in the sky. If the whole force took to the basement whenever there was a tornado alert for the area, much productive time would be lost.

When there is a forecast of severe weather at times of shift changes, a flag with a large black square on a field of red (the Navy hurricane signal) is hung at exits to warn employees to turn on their car radios and take any precautions they think necessary.

Circle Item No. 22—Reader Service Card

In roaring steel mills . . . in vital oil fields throughout the world . . . at throbbing power plants large and small . . . behind the guarded gates of highly-secret atomic installations and missile centers—wherever complete fire protection is important, you'll find Ansul. • Industry knows that only Ansul digs deep into basic fire research, that Ansul can be depended on for the best answers to fire protection problems. • More than 20 years ago Ansul began this search for new and better ways to prevent fire loss. Ansul pioneering continues today with the introduction of new, improved fire fighting equipment and advanced training techniques. • Put this knowledge and ability to work to help you build the complete fire protection program that could someday save your plant from destruction. • Start with Ansul people. Draw on their technical skills, their practical experience to solve the fire protection problems you have. ANSUL CHEMICAL COMPANY, MARINETTE, WISCONSIN.

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THE SAFETY LIBRARY

Reviews of books, pamphlets and periodical articles of interest to safety men

By LOIS ZEARING, Assistant Librarian, NSC

BOOKS AND PAMPHLETS

Chemicals

Nitroparaffins and Their Hazards, 1959. 59pp. The National Board of Fire Underwriters, 85 John St., New York 38. (Research Report No. 12.) Free.

Coking Industry

Injury Experience in the Coking Industry 1956-1958. 15pp. Publications Distribution Section. U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7862.)

Fire Prevention

N.F.P.A. Inspection Manual, 1959. 314pp. National Fire Protection Association, 60 Batterymarch St., Boston 10. $4.

Gas

Safe Distances for Installations of LP-Gas Containers. Special Hazards Bulletin. Revised April, 1959, Z-38, Vol. XII. pp 19-20. Association of Casualty and Surety Companies, 60 John St., New York 38.

Health

The Industrial Environment—Its Evaluation and Control. Syllabus for Short Courses for Industrial Hygiene Engineers and Chemists. U. S. Public Health Service. 1958. Superintendent of Documents, Washington 25, D. C. (Public Health Service Publication No. 614.) $2.75.

Ladders

Portable Wood Ladders, American Standard Safety Code for 1959. 21pp. American Standards Association, 70 E. 45th St., New York 17. (A14.1-1959) $1.50.

Mines

Analysis of 494 Accidents, Open-Pit Iron-Ore Mines, Beneficiation Plants and Shops, Lake Superior District. 1959. 13pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7892.)

Airflow Changes in Multiple Fan Systems. 1959. 24pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7889.)

Block-Caving Mining Methods and Costs. Bagdad Mine, Bagdad Copper Corporation, Yavapai County, Ariz. 1959. 28pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7890.)

Injury Experience in Coal Mining, 1953-54. 1958. 105pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7859.) Free.

Injury Experience in the Oil and Gas Industry of the United States—1957-1958. 9pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Mineral Industry Survey H.S.S. No. 464.)

Probability Studies on the Incendivity of Permissible Explosives 1959. 22pp. Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigations 5463.)

Sinking Methods and Costs at the Burgin Shaft, Bear Creek Mining Company, East Tintic Project, Utah County, Utah. 1959. 26pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7879.)

Studies with High-Expansion Foam for Controlling Experimental Coal-Mine Fires. 1958. 18pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigations 5419.)

Tools

Powder-Actuated Tools. Special Hazards Bulletin. Revised March 1959. Z-25, Vol XII, pp. 14-18. Association of Casualty and Surety Companies, 60 John St., N. Y. 38.

MAGAZINE ARTICLES

Abrasive Wheels

"The Case for 'Built-In-Guard' Cup Wheels." Howard R. Kerber. *Grinding and Finishing.* March 1959. pp. 40-41.

"R-r-r-right Face!" Richard L. McKee. *Grinding and Finishing.* March 1959. p. 11.

Accidents

"New Ways to Get Hurt." Clyde F. Schlueter. *Supervision.* April 1959. pp. 18-19.

Automation

"Automation Works in the Small Shop Too!" Ralph E. Cross. *American Machinist.* April 6, 1959. pp. 144-146.

Construction

"Basic Principles of a Contractor's Safety Program." Thomas G. Sanberg. *The Central Constructor.* February 1959. pp. 12-13.

"New Shoring Method Facilitates Excavation and Foundation Work." *The Plant.* April 1959. p. 27.

Electricity

"Dresden Nuclear Power Station." W. J. Shewski. *Electrical Engineering.* April 1959. pp. 304-309.

Eye Protection

"Eye Protection in the Chemical Industry." Ray E. Joyner. *Industrial Medicine and Surgery.* April 1959. pp. 174-177.

Fire Prevention

"The Economics of Adequate Forest Fire Protection." C. A. Hubert. *Pulp and Paper Magazine of Canada.* March 1959. pp. 154, 156-159.

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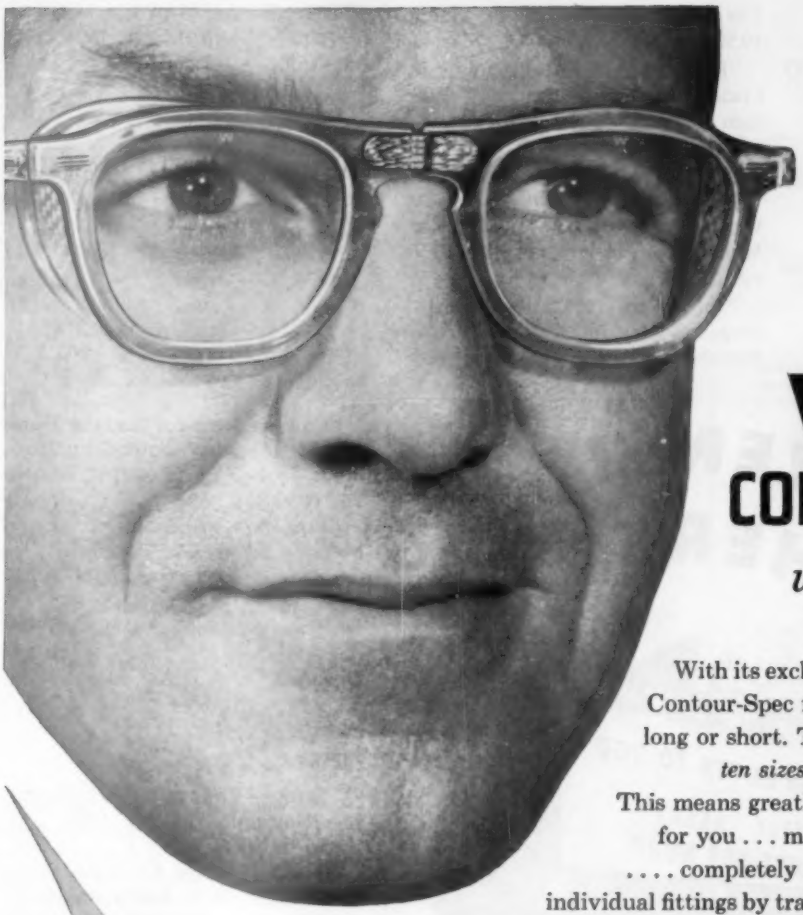


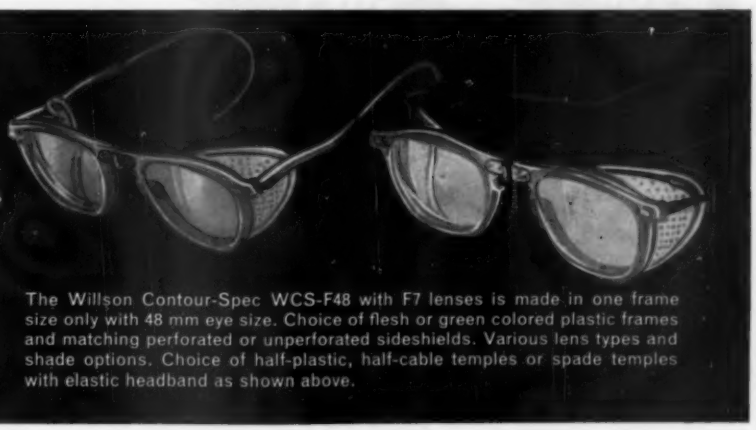
here's your answer to 10 common spectacle problems

WILLSON® CONTOUR-SPEC®

with F7 lenses

With its exclusive Hinged Bridge the Willson Contour-Spec fits *all* faces... broad or narrow, long or short. Thus, *one size only replaces up to ten sizes of conventional safety spectacles!* This means greatly simplified inventory-handling for you . . . makes ordering and stocking easy .... completely eliminates size specification and individual fittings by trained personnel. You *always* have proper-fitting spectacles on hand for *new* as well as present employees! And the new F7 shape Contour-Spec provides wider area of vision...broader protection...and the smarter appearance that wins immediate approval of workers! Standardize on the Contour-Spec with F7 lenses and you'll bring *new efficiencies, new economies* to your program.

the one-size safety spectacle that fits everybody



The Willson Contour-Spec WCS-F48 with F7 lenses is made in one frame size only with 48 mm eye size. Choice of flesh or green colored plastic frames and matching perforated or unperforated sideshields. Various lens types and shade options. Choice of half-plastic, half-cable temples or spade temples with elastic headband as shown above.

Call your nearby Willson distributor for a demonstration of the new Willson Contour-Spec with F7 lenses, or write direct for descriptive data and prices.

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Circle Item No. 23—Reader Service Card

Safety Library

—*From page 66*

"How Plastics Are Made." Part II. Frank Hanifin. *Fire Engineering*. March 1959. pp. 204-205.

"Newest Research Shows What Causes Plant Fires." Ernest W. Fair. *Textile World*. April 1959. p. 58.

Health

"Hygienic Standards for Occupational Health." Charles R. Williams. *The Magazine of Standards* March 1959. pp. 68-75.

"Industrial Hygiene Programs in Local Health Departments." William G. Fredrick. *American Journal of Public Health*. March 1959. pp. 360-363.

"Preventive Medicine Pays Its Way." Stanley P. de Lisser. *The Management Review*. April 1959. pp. 51-52.

"Should an Occupational Health Program Be Included in Local Health Department Activities." William L. Wilson. *American Journal of Public Health*. March 1959. pp. 355-359.

Health Hazards

"Talc Pneumoconeosis." Albert O. Seeler and others. *A.M.A. Archives of Industrial Health*. April 1959. pp. 392-402.

"Toxicological Studies on Hydrocarbons." Horace W. Gerarde. *A.M.A. Archives of Industrial Health*. April 1959. pp. 403-418.

Hospitals

"Caution Signs for Radium Handling." Robert W. Satterfield. *Hospitals, Journal of the A.H.A.* March 16, 1959. pp. 75-76, 78.

"Problems of Fire Protection in Mental Institutions." Charles E. Goshen. *Mental Hospitals*. April 1959. pp. 31-34.

"The Purchasing Agent and National Disaster." Joseph W. Hinsley. *Hospitals*. J.A.H.A. March 16, 1959. pp. 81, 84-87, 93.

Mines

"Safety—Product of Vigilance." *Mechanization*. March 1959. pp. 47-55.

"Ventilation by Large-Diameter Bore Holes." D. C. Ridenour. *Mechanization*. March 1959. pp. 69-70.

Motors

"How to Maintain Your Electric Motors." M. J. Wohlgemuth. *Engineering and Mining Journal*. April 1959. pp. 99-103.

Noise

"Sound-Level Surveys for Hearing Conservation." William B. Snow *Noise Control*. March 1959. pp. 13-17.

Refrigeration

"Some Suggestions on Safety." C. T. Baker. *Refrigeration*. February 16, 1959. p. 2.

Solvents

"Don't Use Carbon Tet." *Modern Sanitation and Building Maintenance*. March 1959. pp. 21 and 47.

"Toxic Solvents: A Review." Ethel Browning. *British Journal of*

—*To page 84*

It's the constant "newness" that makes them effective. Copy changed quickly with "mechanical hand," and without ladder climbing.

FREE Wagner Safety Data File . . Use coupon now!

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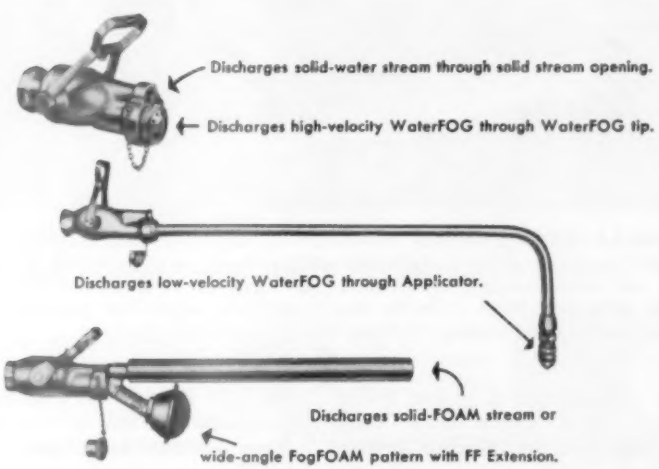
Circle Item No. 24—Reader Service Card

Rockwood SG-60 WaterFOG Nozzle is 5 *different* nozzles in one

Eliminates "Special" and Single Purpose Nozzles!

Here's a true all-purpose nozzle! Discharges water in any of the accepted water patterns, as well as Rockwood solid-stream FOAM or Rockwood FogFOAM. Compact and lightweight, it's a fast, economical fire-fighting tool that provides maximum protection for the man handling it. For complete details on the Rockwood SG-60 WaterFOG Nozzle and other Rockwood equipment described on this page, send coupon below.


Discharges solid-water stream through solid stream opening.
Discharges high-velocity WaterFOG through WaterFOG tip.
Discharges low-velocity WaterFOG through Applicator.
Discharges solid-FOAM stream or
wide-angle FogFOAM pattern with FF Extension.

Tested and listed by Underwriters' Laboratories, Inc.

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Engineers Water . . . to Cut Fire Losses

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OTHER ECONOMICAL, HIGH EFFICIENCY ROCKWOOD FIRE-FIGHTING AIDS

FOAM and "Wet" Eductor with the new FW Metering-Check Valve

Automatically proportions correct amount of FOAM or "Wet" to water in hose lines.

Rockwood Double Strength FOAM Liquid

Mixes 3 parts FOAM Liquid to 97 parts water. Creates a heat resistant blanket that puts out fires, inflammable liquids and ordinary combustibles faster and at lower cost.

Rockwood WET

Mixes 1 part WET with 99 parts water. Increases water's penetrating and extinguishing action for quicker results against deep-seated fires. Saves time, water, and manpower.

Bayonet Piercing Applicator

Has hardened steel cutting tool attached to tip. Permits operator to pierce partitions, into interiors, etc. Discharges low-velocity Water-FOG.

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Circle Item No. 25—Reader Service Card

Hospitals on Wheels

Ambulances operated by Milwaukee County Institutions are prepared for almost any emergency short of major surgery

SEVERELY INJURED or critically ill persons in Milwaukee County have improved chances for survival, thanks to the ambulance service provided by the County Institutions and Departments. The 10 ambulances operated by the Central Garage of the Milwaukee County Institutions have modern equipment and expert personnel to provide all medical service possible in a moving vehicle.

These ambulances serve the whole county, with a population of well over 1,000,000. Last year these ambulances made 18,675 calls and handled 24,519 patients.

An important feature of the Institutions' ambulances is the availability of ample oxygen supplies and the modern equipment for resuscitation, inhalation, and aspiration. Equipped much like emergency rooms in modern hospitals, the ambulances even incorporate piped oxygen.

The oxygen equipment is built into the ambulance according to the Institutions' own design and specifications. Oxygen is piped from a large "M" cylinder (122 cu. ft) installed under the floorboards in a compartment measuring 55 by 9⅝-in. The oxygen feeds from the cylinder valve up to the two distinct oxygen service sections. The first area served is the resuscitator-aspiration station in the foremost end of the patient's section of the ambulance behind the driver's seat.

In addition, oxygen is piped under the floorboards to a side compartment farther back in the ambulance. This compartment, on the left side of the cots, contains two more regulating stations and two more resuscitator and therapy units. Equipment in this compartment is behind sliding panels. These oxygen stations allow oxygen to be administered to three patients simultaneously, while the ambulance is in motion.

Portable oxygen equipment allowing resuscitation to be administered to patients at the scene of an accident, or at any hard-to-reach location, is stored next to the cabinet behind the driver's seat. Two or three pairs of "D" cylinders (12.7 cu. ft. each) are included with equipment carried by each ambulance. Mounted in aluminum cases, the portable resuscitators are light and easy to carry to the accident site.

Availability of an adequate oxygen supply in the ambulances and at the Central Garage is of the utmost importance. All small cylinders are carried in duplicate in portable units. As a further precaution, pres-

AMBULANCES operated by Milwaukee County Institutions are prepared for most emergencies. They carry equipment for dealing with motor-vehicle wrecks, fire, excavation rescue, asphyxiation, heart cases, mental patients, and many other situations. Spare cylinders insure adequate oxygen for protracted treatments. (Photos by National Cylinder Gas. Div., Chemetron Corp.)

By EDMUND ROSTKOWSKI

Supervisor, Central Garage, Milwaukee County Institutions, Milwaukee, Wis.

THE GLOBE M/M MOUTH-TO-MASK RESUSCITATOR ...AN EXTENSION OF THE NEWLY APPROVED MOUTH-TO-MOUTH TECHNIQUE

WITHOUT THE OBJECTION OF INTIMATE CONTACT

Another first from Globe! A new concept for safer and more effective "manual" resuscitation. With the Globe M/M Mouth-to-Mask Resuscitator, you get all the benefits of approved mouth-to-mouth resuscitation plus the important advantage of being separated from the victim. You can monitor his chest movement and lip color without interrupting the rhythm of resuscitation.

In just a few short months—the Globe M/M Mouth-to-Mask Resuscitator has received acceptance by Industrial plants, rescue squads, fire and police departments, YMCA's, chemical plants and utility companies.

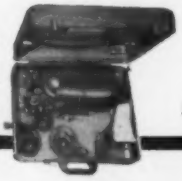
When you have M/M Mouth-to-Mask Resuscitators strategically located throughout your plant, life saving resuscitation can be started immediately by anyone at the scene of the asphyxial accident.

34.50 It's low in cost and very practical. Complete kit—including resuscitator, transparent face piece, aspirator, airway and carrying bag weighs only 2 pounds.

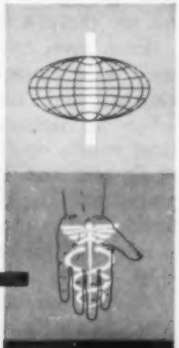
Designed and built to the same high standards as:

Globe Dualife Air/Oxygen Mask and Resuscitator

Globe Custom Seeler Resuscitator



Globe Volunteer Seeler Resuscitator



When the tools of the trade must be perfect, insist on

GLOBE RESUSCITATION AND BREATHING EQUIPMENT

For complete information the Globe M/M Mouth-to-Mask Resuscitator or other Globe resuscitation or breathing protection equipment, write to:
Medical and Hospital Dept., Globe Industries, Inc., 125 Sunrise Place, Dayton 7, Ohio

A few choice territories still available for qualified industrial safety specialists.

GLOBE

Circle Item No. 26—Reader Service Card

PORTABLE oxygen equipment, in aluminum cases at right, allow resuscitation to be administered at the accident site. Some ambulances also carry portable units which can be strapped to the rescuer's back, leaving his hands free for climbing or for excavation rescue and therapy.

sure gauges are inspected three times daily. Notations are made on oxygen check-charts for each ambulance during weekly inspections and after every use of oxygen equipment.

Cylinders are replaced whenever pressure drops to between 300 and 500 psig. In addition to the oxygen cylinders carried in the ambulances, approximately 22 "D" cylinders and five "M" cylinders are kept in reserve in the garage. Eight more "D" cylinders are kept on hand, four for use in training and four for the sheriff's station wagon.

Each time oxygen equipment is used on a patient, it is thoroughly cleaned and sterilized. In cases where an ambulance carries a patient with a contagious disease, the equipment and the interior of the ambulance are washed out and aired for 24 hours. The entire fleet is inspected for cleanliness on every shift.

All the ambulances can handle four stretcher cases with two sitters and a crew.

Radio dispatching of ambulances has been developed to a fine point. For each call, the driver or dispatcher stamps a form under a printing time clock at least five times during the progress of the call: (1) when the call comes in; (2) when the ambulance leaves the garage; (3) when the driver radios that he has arrived at the scene; (4) when the patient has been delivered to the hospital, and the driver radios that the ambulance is again available for call; and (5) when the ambulance returns to the garage. In returning to the garage, the driver immediately writes out the details and experiences of the call. In this way the County has a complete and useful record of every call.

Types of Calls. Although the majority of requests for service are house calls dealing with emergency accident, obstetrical, and psychiatric cases, the County service responds to almost all types of calls, including train and airplane accidents, highway accidents, and rescue calls.

We monitor police and fire calls by two-way radio, and answer any request for service from medical institutions or the sheriff's department. The ambulances automatically service certain classes of police and fire calls, such as three-alarm fires or hotel fires.

The ambulances are equipped for all types of emergencies. In addition to oxygen equipment previously described, the ambulance contains a 15-lb. wrecking bar, 5-lb. crowbar, chisels, hammers, hacksaw, pliers, shears that will cut through ¼-in. metal, splints, handboards

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RESUSCITATORS of positive-negative pressure type are carried. Regulator-resuscitator-aspirator just behind driver's seat is served by large "M" cylinder installed in a compartment under the floor boards.

with A.W. ALGRIP abrasive flooring

Put A. W. ALGRIP underfoot in your plant . . . you'll get safety and sure-footedness. A. W. ALGRIP eliminates sliding and slipping . . . gives you assured footing under the most dangerous plant conditions . . . on inclined as well as flat surfaces.

A. W. ALGRIP rolled steel floor plate is produced by Alan Wood Steel Company by a patented process in which an abrasive – just like the kind that is used in grinding wheels – is embedded to a specified depth. It becomes an integral part of a tough steel plate.

A. W. ALGRIP can be used as independent flooring . . . or as flooring overlay. Put your plant on a safe footing, with A. W. ALGRIP . . . Approved for Safety by Underwriters' Laboratories. Write for Bulletin AL-N1.

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Circle Item No. 27—Reader Service Card

Leased lines lengthen long arm of plant watchman

Code words and a remote control system enable a single security guard for one firm to monitor a warehouse eight miles away against fires and break-ins after work hours. The lone guard also can use the system to permit authorized personnel to enter the warehouse—without keys.

This security arrangement is based on leased telephone lines between the Standard Pressed Steel Company plant at Jenkintown, Pa., and its warehouse at Horsham. Pinkerton's National Detective Agency, Inc., operates the system for SPS.

When the day (and only) shift at the warehouse stops work, an employee phones the main security post at Jenkintown. A guard sets the sentinel system for after-hours operation.

Monitors for fire and forced entry are wired via phone company lines back into a console control panel at the desk at the main guard post, manned 24 hours daily.

A buzzer sounds and a light goes on to indicate a fire or illegal entry. A meter needle swings over to show in which of three Horsham warehouse buildings the emergency has occurred. After an alarm, the guard on duty at Jenkintown immediately contacts the township police.

A voice connection between warehouse and plant permits the guard at the main security point to allow authorized personnel access to the warehouse without need for keys.

The guard gives a worker a code word for identification, usually making up the word on the spot. When the worker gets to Horsham, he speaks the code word into an open speaker above the warehouse's main entrance. The guard, eight miles away, merely presses a button to let the employee in.

REMOTE surveillance system not only monitors distant warehouse for fire and intrusion but also permits remote control of access to the facility on off-hours. Two-way speaker system—one speaker in console at main guard post, the other at door to warehouse eight miles distant—permits security officer to monitor noises at warehouse and talk to anyone wanting access. He presses button on console, after hearing code word, to open the door.

Riegel

. . . the preferred glove among skilled welders

TOPS IN DOLLAR VALUE

CHOSEN BY SKILLED WELDERS for extra heat protection, greater finger dexterity, and all-around comfort. Horsehide and "Flextan" leathers stay soft after dry-cleaning. Exposed seams completely welted. Seamless backs.

CHOSEN BY EXPERIENCED BUYERS for soft, sure comfort, longer wearability, excellent price, and quick acceptance in the plant...backed by Riegel's ready service and quick delivery.

COMPLETE LINE for any welding need. Let Riegel's specialists help match the right glove to the job. Ask for free catalog.

HEAVY WELDER No. 997
Top quality green "Flextan", lined for heavy, hot jobs.

WELDERS MITTEN No. 987
Green "Flextan" leather, excellent protection, flexibility of finger movement.

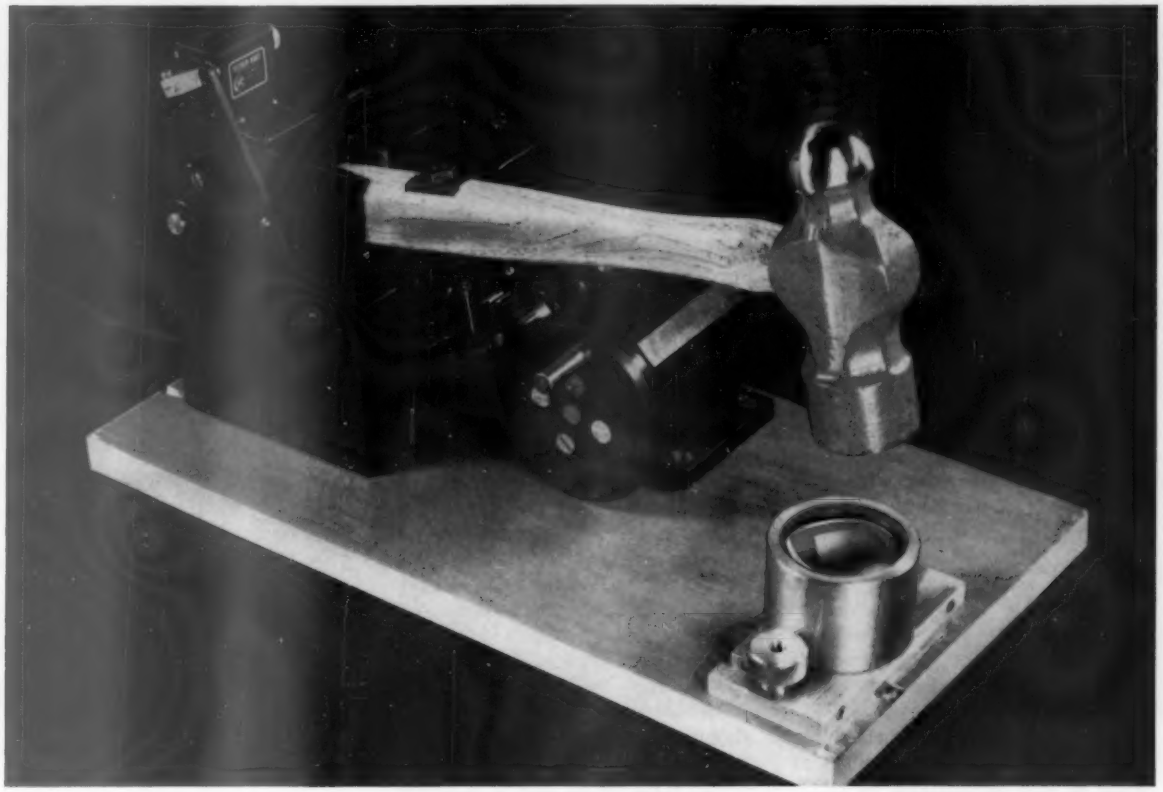
SPOT WELDER No. 897
For lighter jobs, unlined green "Flextan" leather.

GENUINE HORSEHIDE PALM No. 956
Horsehide Palm, clute pattern cut extra long to prevent wrist chafing, and fourchetted for extra comfort and dexterity. Welted and wool-lined for complete protection.

RIEGEL TEXTILE CORPORATION • Conover, N. C.

Circle Item No. 28—Reader Service Card

Bal-SAFE lens resists 381,197 blows from 2-lb. steel hammer!



Vivid demonstration of impact resistance shows how B&L toughened safety lenses protect your workers' eyes

We know how to make 'em *tough!* Each blow of the hammer struck the polished lens surface with the force of .87 foot pounds . . . equal to that of a 1⅛" diameter steel ball dropped freely from a height of 50 inches. That's *twice* the impact required in Federal specification for the Drop Ball Test. But it wasn't until the 381,198th blow that the Bausch & Lomb lens finally yielded!

An ordinary industrial thickness (3 m/m) Bal-SAFE lens was taken from stock for this demonstration which was set up as a stunt for the National Safety Congress last Fall in Chicago.

For eye protection, safety lens quality is never a luxury. It may mean the difference between a worker's precious vision and sudden, tragic black-out. Insist on the extra margin of safety of Bal-SAFE lenses for every worker—plano or prescription.

BAUSCH & LOMB

SINCE B&L 1853

INDUSTRY'S MOST COMPLETE LINE

Protection-PLUS Safety Eyewear

protection + economy + worker acceptance

CONSULTATION CORNER

Questions on accident prevention, fire protection and occupational hygiene are answered by mail. A few are selected for publication

By L. C. SMITH, Industrial Department, NSC

Toxicity of Dieldrin

Question: We would like to obtain information on the toxicity, and precautions that should be taken, if dieldrin is used as a moth-proofing agent. To what degree is dieldrin absorbed by the skin? Are there any reactions with the skin?

Answer: Dieldrin is a chlorinated pesticide capable of producing a long-lasting residual effect. This is the reason for its usefulness in prevention of moth damage. Chlorinated pesticides are toxic to all forms of animal life, although toxicity may vary greatly from one species of animal to another.

Dieldrin is absorbed readily through the skin, as well as through the lungs or the digestive tract. It is especially absorbable in xylene as a carrier.

One peculiarity of dieldrin in xylene is: it is roughly 40 times as toxic in skin applications as DDT. Tests with certain other solvents indicate a factor of only six. An important difference is that undissolved DDT is not absorbed through the skin, but undissolved dieldrin is readily absorbed.

Dieldrin acts as a central nervous system stimulant. The compound also greatly reduces or eliminates appetite. Nervous symptoms or anorexia may appear first. A few large doses produce increasing stimulation of the central nervous system, culminating in one or more convulsions. If death does not occur, there is relatively prompt recovery without significant weight loss or other permanent injury.

A large number of moderate-size doses may produce without warning a condition marked by complete loss of appetite, weight loss, and convulsions. Without treatment, death is apparently inevitable. Many relatively small doses may produce one or a few convulsions with lesser accompanying symptoms, but without any permanent aftereffects.

Little is known quantitatively about the chronic toxicity of dieldrin for man. At least 10 per cent of men, applying a 50 per cent water-wettable powder as a 1.25 per cent suspension at the rate of one gram per square meter, have developed poisoning within 3 to 24 months after the first exposure.

The recommended threshold limit value for dieldrin concentrations in air is 0.25 milligrams per cubic meter. Early symptoms of acute poisoning include headache, nausea, vomiting, and dizziness. With more severe poisoning, convulsions follow or may appear without the warning symptoms mentioned.

Persons working at or near the point of application of pesticides should wear a respirator approved by the Bureau of Mines for toxic dusts. Wearing of gloves is necessary to avoid contact of the pesticide with the skin. The gloves should be made of a material approved for use with chlorinated pesticides.

Dust-type goggles are a must. Exposed surface of the skin should be protected by a protective cream not soluble in oil.

It is desirable to provide local exhaust ventilation at the point where the pesticide is applied. Dusts from the pesticide mixture must not be allowed to contaminate food, lunch boxes, or food preparation equipment. Persons working with this material should not eat, smoke, or chew tobacco, while on the job. They should wash their hands before eating, rinse their mouths before drinking, and have a shower and a change of outer clothing before they leave at the end of the shift.

Clothing contaminated with a liquid solution of dieldrin, should be carefully removed immediately and the skin area cleansed with soap and water. Contaminated clothing should be relaundered before reuse.

If material has splashed into the eyes, wash them immediately with clear water and obtain prompt medical attention. Even though the insecticide may not injure the eye seriously, associated solvents may be highly irritating.

If material has been swallowed, induce vomiting immediately. This may be done by giving warm soapy water or warm salt water—one tablespoonful of salt to a glassful. But never try to give anything by mouth to an unconscious person.

Whenever poisoning by a chlorinated pesticide is suspected, take the patient to a physician right away. Be able to give the physician information on all chemicals in the material with which the patient has been working. If possible, have available a label or label container and other descriptive literature.

Slip-Resistant Materials

Question: We are looking for information on slip-resistant materials for floor plates, catwalks, and stair treads. We have had several accidents from slips and would like to find something more slip-resistant than ordinary diamond-tread steel plate or grating material.

Answer: There are materials available to help you. There is a metal floor plate with an imbedded abrasive that might be the answer to your slipping problems. Also, there is an aluminum abrasive tread plate, with aluminum oxide particles imbedded in the surface, that has good slip-resistant qualities.

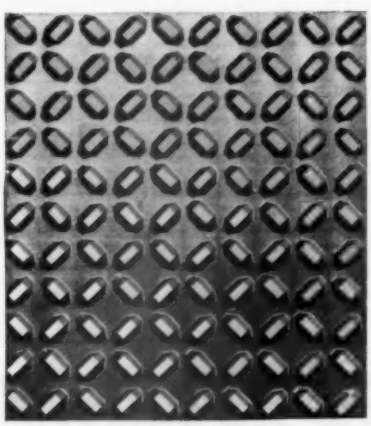
As far as stair treads and catwalks are concerned, there are several possibilities. Gratings and treads are available with V-grooves in the top surfaces in which abrasive grains are imbedded in a hard resin. An expanded metal grating with top edges serrated does a good job of preventing slips.

These materials are available commercially. You may obtain descriptive literature by writing directly to the company. Check your March issue of the NATIONAL SAFETY NEWS for names and addresses of sources.

One slip can cost more than USS Multigrip

$100,000 for a single fall? Sounds fantastic, doesn't it? But there are actual cases involving suits for $100,000 or more for single falls. The average cost of injuries from slips and falls is lower than that, of course. In six states, during 1954, the cost per fall averaged close to $900.

You can eliminate many slips and falls by giving your workers a floor studded with cleats—USS Multigrip. This floor plate provides safe traction in any direction. The cleats are flat on top, easy to walk on—and do not catch the shoe.



For machine shops, loading platforms, cat-walks, and other dangerous locations, Multigrip supplies safety plus.

Where floors take a heavy beating from traffic, Multigrip will stand up for years under constant use. Oil and water won't soak in and can be easily removed from the surface with regular cleaning materials. You save money by having a floor that is easy to sweep or flush clean—and there's little or no maintenance.

On your next inspection trip, search out the danger spots—and make them safe with USS Multigrip.

USS is a registered trademark

Sold by leading distributors from coast to coast.

United States Steel Corporation – Pittsburgh
Tennessee Coal & Iron – Fairfield, Alabama
Columbia-Geneva Steel – San Francisco
United States Steel Supply – Steel Service Centers
United States Steel Export Company

United States Steel

...and
good housekeeping
begins with
Stonehouse Signs!

Nothing fosters accidents, and inefficiency, like dirt and disorder. Inevitably, production losses, mistakes, accidents occur where industrial housekeeping is poor.

Plants throughout the country enlist employee aid in this important undertaking by the use of INDUSTRIAL GOOD HOUSEKEEPING SIGNS from STONEHOUSE. Constantly reminding, these signs work efficiently, endlessly, at lowest possible cost. Each sign is made of enduring, tested materials, and manufactured in accordance with American Standard specifications.

✻ *Write today for our free, full-color, 64 page catalog of thousands of ready-to-ship safety signs, plus information about custom-printed signs to meet your special needs.*

"Signs since 1863"

Stonehouse SIGNS

STONEHOUSE SIGNS, INC., Stonehouse Building, 9th and Larimer, Denver 4, Colorado

Circle Item No. 30—Reader Service Card

Are You Teaching?

—From page 36

c. Should give students the scope of the subject.
d. Should develop interest in the subject.

Sample—In this session we are going to discuss the various types of personal protective equipment and learn how and when such equipment should be worn. This knowledge may at some future time save your life or the life of a fellow employee.

5. **Presentation:**
   a. Should give the plan of action.
   b. Should indicate the method of teaching to be used (lecture, demonstration, student participation, or combination).
   c. Should contain notes for instructor activity (show chart, develop on blackboard.)
6. **Application:** Should, if possible, indicate how students will apply this material immediately (problems may be worked; a job may be performed; students may be questioned on understanding and procedures).
7. **Summary:**
   a. Should restate main points.
   b. Should tie up loose ends.
   c. Should strengthen weak spots in instruction.
8. **Test:** If a test is planned, it should be announced to students at the beginning of the session.
9. **Assignment:** Should indicate to students references to be checked or materials to be prepared for future lessons.

Any person delegated the responsibility of teaching others should have an organized plan. It may be more elaborate than the one suggested, or for the more experienced instructor it may be quite simple, but in any event good teaching demands good planning.

A Few Years Hence

While waiting in line at the rocket station ticket office, a man asked for a seat on a flight to the moon. "Sorry, sir," the attendant said, "but all passenger flights have been canceled for the next few days."

"Why is that?" asked the man.

"Well, you see, sir," said the clerk, "the moon is full right now."

Closed Circuit TV

—From page 29

site. Formerly, these valves required a 24-hour watch by a crew of workers. Now one team keeps an eye on the valves from a remote command post. When trouble develops, CCTV spots the mishap and enables a worker to get a quick start to the scene of difficulty.

In an operation concerning surveillance of a trucking dock, a five-camera setup permits one man to supervise the entire dock. Annual savings resulting from this system are $18,000. Accidents prevented? Many!

So the story goes—from steel processing to you-name-it, industrially. These installations are mainly black and white, but color is coming into the picture. Its major drawback is its cost.

Costs of some color CCTV systems have approached $20,000. Naturally this varies, and with increasing use and manufacture of color systems, the price may drop.

How is color, in justifying its cost, doing a special job for industry? For one thing, color is important where color dyes are used for tracers, where colors have to be matched, and where color information will increase the accuracy of information televised.

The arrangement of CCTV for color is similar to that for black and white, but color TV requires much more power—in fact, the use of a separate power supply. (Incidentally, color used in 2-D produces shades and tones to give 3-D.)

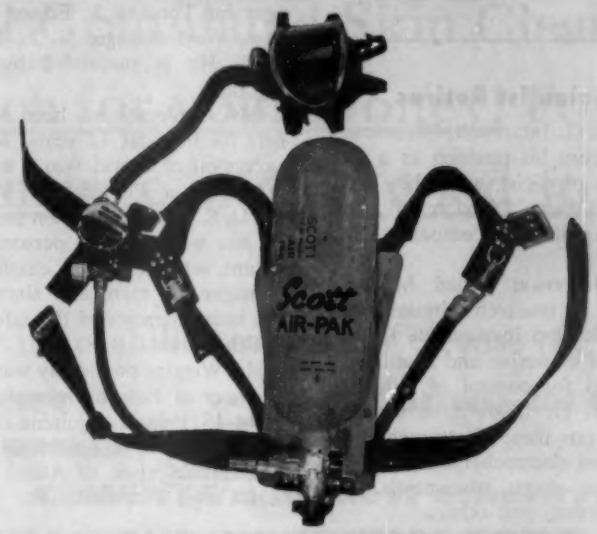
Another application of color CCTV is in observing boiler-flame and water-level operations in a power plant. In such installations the monitors for flame-viewing of the inside of a boiler, water gauge, and smokestack can be mounted in the main control panel, along with the other power plant control and indicating devices.

Where it is important to follow an action, a movable mounting for the camera is installed. This is a remote pan-and-tilt head which allows the camera to move up, down, and sidewise. This installation may require a remote focus control to allow depth-of-field adjustment.

Industrial training often involves

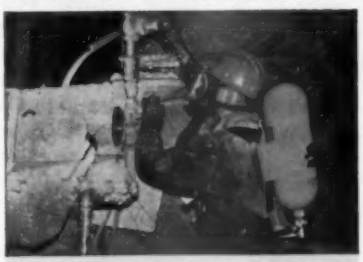
—To page 82

INDUSTRIAL BREATHING HAZARDS MADE SAFE



Bureau of Mines Approval No. 1308

THE MAN WITH THE SCOTT AIR-PAK BREATHES PURE FRESH COOL AIR AT THE LOWEST OPERATING COST*



Operating a sand mill in a foundry.

Worker with Scott Air-Pak cleaning a degreaser.

In temperatures from 20° below to oven heat the Scott Air-Pak delivers cool, pure, fresh air comfortably, to meet the full needs of the wearer, regardless of the degree of exertion. Breathing is completely independent of surrounding atmospheres. The Scott Air-Pak is always ready. Takes only seconds to go into action. Ideal for industrial routine or emergency operations.

The new Scottoramic Mask gives vision unlimited — wide angle vision in all directions that helps the wearer to spot danger zones quickly for maximum safety.

**Scott Air-Paks can be refilled at a surprisingly low cost. Repair and maintenance costs are lower than other types of self-contained breathing protection equipment.*

On hazardous jobs, Scott Air-Paks help management and labor breathe easier. Send for the Booklet "Scott Air-Paks Save Money, Man Hours and Men for Industry". Write direct or ask your nearest Scott Distributor.

SINCE 1932 Scott FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORP.

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Canada: Safety Supply Co., Toronto — Branches in principal cities

Export: Southern Oxygen Co., 250 West 57th Street, New York 19, New York

Circle Item No. 31—Reader Service Card

PERSONALS

News of people in safety and related activities

MSA Scientist Retires

MOSES G. JACOBSON, 73, recently retired from his position as a staff research physicist with the Technical Products Division of Mine Safety Appliances Company, Pittsburgh, Pa.

Mr. Jacobson joined MSA in 1930 as a research physicist and helped develop instruments for detection of explosive and health hazards, and for control of industrial processes. He holds more than 50 patents on these instruments, as well as on electrochemical analysis, radio components, telecontrols, flow measurement, and others.

He is a member of the American Physical Society, Electrochemical Society and the Instrument Society of America.

A native of Tartu, Estonia, Mr. Jacobson received bachelor and master degrees from the Imperial University of St. Petersburg, Russia, and studied for his Ph.D. degree at the University of Wurzburg, Germany. He taught at the University of St. Petersburg, the Polytechnical Institute in Moscow, and headed the physics department at Agricultural College, Gori-Gorki, Russia. He came to the U. S. in 1923 from Latvia, and—after five years with the Victor Talking Machine and the General Electric Company—joined MSA.

Named Akron's Safety Man of Year

JESSE B. PORCHER, safety director for Akron Division of Ohio Edison Company, was named Akron's "Safety Man of the Year" for meritorious and outstanding contributions of time and effort in the promotion of personal and public safety. The presentation was made at the banquet of the 16th Annual Greater Akron Safety Conference.

Mr. Porcher has been in safety work with the Akron division since 1937. He is a past general chairman of the National Safety Council's Public Utilities Section and has served the Akron Safety Council for 15 years.

STANLEY E. APPLEGATE, for the past 14 years safety and health manager for Thomas A. Edison Industries, West Orange, N. J., has retired. He is succeeded by BERT WIGGINS.

Mr. Applegate has been with the firm for the past 42 years, with the exception of World War I when he served as a Pharmacists Mate in the U. S. Navy. At Edison Industries he has worked as a personnel assistant, safety engineer, employment manager for men, and since 1945 has been manager of the safety and health section.

Mr. Wiggins previously was safety engineer of Edison Industries from 1944-45. Prior to rejoining the firm, he was executive supervisor at the Chesterfield plant of Allied Chemical Corp., Hopewell, Va.

CLARKE SMITH, U. S. Manager, Royal Insurance Co., Ltd., was elected chairman of the board of Underwriters' Laboratories to replace C. W. Ohlsen, retired. Merwin Brandon was elected president, to replace Curtis R. Welborn, retired. Lester S. Harvey, president New Hampshire Fire Insurance Co. and W. L. Nolen, U. S. Manager, North British and Mercantile Insurance Co., Ltd., were elected trustees of the board, replacing C. W. Ohlsen and H. A. Clark, retired.

EDWARD MANDRY, superintendent of industrial relations at the Cleveland, Ohio, plant of Republic Steel Corporation, was elected president of the Society of Ohio Safety Engineers for 1959-60.

Mr. Mandry, a member of the society for 19 years, previously served as its secretary and vice-president. He has been with Republic Steel and predecessor companies in safety and industrial relations work for the past 41 years.

Hazards Will Increase With Radiation Levels

Probability that accidents involving serious levels of radiation exposure will increase in coming decades seems likely because of the tremendous growth in use of radioactive materials. Such accidents can be handled well, if the physician and industrial hygienist are aware of the complex nature of hazards involved.

Eugene L. Saenger. M.D., of the University of Cincinnati, speaking to the recent Industrial Health Conference in Chicago, also said that humans may receive radiation exposure from sources outside the body, from radioactivity on the body surface or in the body, or from a combination of external radiation and radioisotope contamination.

In radiation accidents damage usually occurs quickly. If radioactive contamination is present, it can be disseminated rapidly. Evacuation of people and closure of the involved area must be carried out immediately. The first 12 hours are critical. From 12-72 hours, diagnostic studies should be organized and decontamination procedures planned and started. At the end of several days the emergency should be under control.

Care of individuals in the emergency period requires certain hematological studies, as well as careful medical observation. Specific medical therapy depends on the levels of radiation found or suspected. Radioisotope contamination requires careful techniques for removal from the body. Collection of specimens of blood, urine, feces, and breath may be necessary, depending on the radio-nuclides involved.

Aid in radiation accidents is available from the Atomic Energy Commission and Department of Defense.

OBITUARY

EDWARD N. LANDRY

EDWARD N. LANDRY, retired director of safety for the Chicago Park District and a former NSC director, died April 24 in Chicago. He was 73.

Born in Hull, Que., Canada, he came to the Chicago area in the early 1900's. Mr. Landry was safety director of the park district for 10 years, retiring five years ago. Before entering the safety field, he worked for 20 years as a sales manager in the steel and wire industry.

Survivors include his wife, three sons, five brothers, and four sisters.

A STATEMENT OF FACT

Only PAX-LANO-SAV® Heavy Duty, The Aristocrat of All Granulated Skin Cleansers gives you so much for your Money! For it is so big in Performance and so good for the Skin!

In fact it is revolutionary in its ability to quickly cleanse the skin of:

GREASE, OIL AND DIRT **GROUND-IN GRIME**
PAINT, ENAMEL, VARNISH, LACQUER **TARS**
PRINTING INK **CEMENTS and most other types of**
STUBBORN TENACIOUS INDUSTRIAL SOILS

Yes, it is revolutionary because even with this remarkable cleansing ability, PAX has been proven through decades of use to be safe and gentle to the skin of both men and women industrial workers. But in addition to this, PAX actually helps improve the softness and texture of work-hardened skin with its exclusive skin conditioning action.

PAX-LANO-SAV is truly economical! In your own plant, under actual washroom conditions, compare PAX with any other granulated skin cleanser, powdered hand soap, cream soap or waterless skin cleaner. You will find that PAX removes a vast range of soils better and faster AND GIVES YOU MORE WASHUPS PER POUND . . . MORE WASHUPS PER DOLLAR than any other cleanser — and with complete worker satisfaction. Happy workers are profitable workers! IT WILL DEFINITELY SAVE YOU MONEY, as it has for thousands of large and small industrial plants throughout the United States and foreign countries.

Because of these benefits many millions of pounds of PAX-LANO-SAV (Heavy Duty) granulated skin cleanser are shipped annually to industrial plants for the use of both men and women workers. If you are not now using PAX-LANO-SAV (Heavy Duty) then test it in your own plant . . . and let your workers tell you what they think of it.

Always look for the PAX ROOSTER and the PAX SEAL for you can be sure that products bearing these trade marks are good and have behind them over 30 years of continuous progress and leadership.

59-E

PAX

G. H. PACKWOOD MANUFACTURING CO.
MANUFACTURING CHEMISTS
1561 TOWER GROVE AVE. ST. LOUIS 10, MISSOURI

Circle Item No. 32—Reader Service Card

RIGGS Nuclear/Industrial Area-Monitoring Instruments

RIGGS

Remote Area Gamma Monitor (GA-3 Series)

A completely self-contained, independent system with pressurized logarithmic response ionization chamber. Model GA-3B has Mercury battery supply for 4 months continuous operation. Model GA-3BA same as GA-3B but with AC transistorized power supply failsafe to DC. Model GA-3A available in AC power supply only.

RELAY RACK MOUNTING

The RIGGS four-gang rack unit may be any combination of the above GA-3 series remote area monitoring instruments. A separate power supply is not required. This eliminates the possibility of complete shutdown in event of power supply failure or during maintenance to the monitoring instruments.
The RIGGS system permits service to each individual unit, when necessary, without affecting continuous monitoring by the others.

General Features and Specifications

Any continuous combination 3-decade logarithmic ranges from .01 mr/hr to 100,000 R/hr.

Energy Dependence
Flat to within ±10% from 80 Kev. to 2 Mev.

Alarm Control System
Meter relays DC, manual or automatic reset. Alarm relay rated 115V AC 5 amps.

Recorder Output
10 mv operated directly from output of unit.

Electronic or Radioactive Calibration Check System
Complete circuit check of all ranges both ends of scale.

Multiple Channel Area Monitoring System (AMS-II)

This system features a console-type cabinet (19" x 21" x 12"), with provisions for ten radiation channels, a transistor power supply, electronic calibration, an alarm system, optional fail-safe power supply, ionization chamber (hermetically sealed) permits wide temperature and moisture variations, completely submersible. Unit requires no external voltage regulation device. The same radiation specifications apply to this system as our GA-3 instruments.

Log Linear Gamma-Beta Portable Survey Meter (GB-1)

Log-linear pressurized ionization chamber portable survey meter. Fast response time 0 to 1 mr/hr linear and two 3 decade ranges from .5 to 500 mr/hr, .5 to 500 R/hr. Mercury battery powered – 300 hr. continuous operation, one year intermittent. Allows fast lab monitoring of low level Gamma-Beta radiation with the linear range and incorporates two higher log ranges for general survey work. Energy dependence – flat to within ±10% from 80 KV to 2 Mev. Other models and ranges available.

Write for free illustrated technical literature and price lists.

Patents Pending.

RIGGS NUCLEONICS CORP.
717 North Victory Boulevard, Burbank, California

Circle Item No. 33—Reader Service Card

CLOSED CIRCUIT TV INDUSTRIAL APPLICATIONS

Observing objects, processes:

- Materials handling
- Assembly aid—large and small parts
- Automatic processes, machines
- Observations: steel plants, arsenals, rolling mills, foundries
- Boiler ignition inspection
- Microscope projection
- Quality control checks
- Atomic assembly
- Reading gauges
- Checking burner flames and stacks
- Fire detection in factories
- Wind-tunnel tests
- Remote time and motion study
- Inspecting and identifying railroad cars
- Locating spaces in parking lots
- Detecting forest fires
- Smoke control
- Life tests
- Particle counting

Observing people:

- Traffic control
  - a. Automobile
  - b. Railroad
  - c. Aircraft
  - d. Pedestrians
- Patient observation in hospitals
- Guard services
- Factory area observation
- Military reconnaissance
- Transmission of identification
- Patrolling
- Rescue work

Teaching and training:

- On-the-job training
- Medical training
- Manufacturing plant communications

Data handling:

- Transfer of blueprint information
- Referral of production data

Military:

- Rocket and guided missile peformance
- Radiation and nuclear research
- View and range finding
- Test cell observation
- Handling and observing action of explosives

the use of color CCTV. Color coding of wiring, components, and materials is important to proper assembly of equipment.

Color TV also has its place in medicine, including dental colleges. The camera is mounted in the lighting fixture above the operating table. All details of the operation (in natural color) are visible to students. Through the camera-control monitor, the picture is carried to the classroom monitor where large groups of students can see the operation clearly.

Color Stereo System

General Electric has developed a color stereo system to permit the use of color-coded parts in atomic-

reactor components and to provide the degree of precise depth perception needed for their correct positioning.

At Cape Canaveral, Fla., missile scientists and military technicians sit before a color television receiver deep in a central blockhouse and watch Jupiter in its huge service tower during phases of firing progress. Principal parts of this system are the color television monitor (receiver) and a remote-controlled camera.

The reliable color image, as transmitted via the closed-circuit system, enables the missile audience to check on successful ignition of propulsion fuels.

At the monitor's right an Army technician sits before electric controls which move the camera atop the blockhouse roof. The TV camera can be swung completely around the horizon, and tilted from ground zero to an elevation of almost 180 degrees. As Jupiter roars from its firing position, the technician tracks its passage to the limits of vision.

Another military application is the color CCTV system used to present briefings in key offices of the headquarters building of the Strategic Air Command, Offutt AFB, Omaha, Neb. CCTV makes it possible for the command staff to gain facts on weather, intelligence, planning, and communication without having to go to briefing rooms.

CCTV circuits eventually will take these briefings to the Pentagon, Air Defense Command, and other command offices in the United States.

And in 3-D, CCTV is gaining momentum. For example, "TV Eyes Watch Atom at Work" (February 1959 NEWS) showed how a half-ton electronic automaton slave-robot can perform almost-human functions under conditions of intense radioactivity at Argonne National Laboratory, Lemont, Ill.

Whether 2-D or 3-D, black-and-white or color, CCTV has its place in the nation's future. In 1956 one top-level crystal gazer optimistically predicted that by 1961 three of every four businesses will use TV in one way or another. This estimate might be high. But it's possible that CCTV, though but 12 years old, is to become a major technique in providing safer environments for the country's work force.

NEW
HOOD
Flexiprene*
THE MOST FLEXIBLE
NEOPRENE WORK GLOVE
EVER MADE
FLEXIPRENE is a jersey shell, neoprene-coated, wing thumb style work glove combining long wearing properties with a flexible construction that gives your workers greater efficiency, more safety and more comfort.
Exhaustive tests prove conclusively that FLEXIPRENE gloves assure the same chemical resistance, performance and wear that made our old style neoprene gloves so highly regarded in every industry.
Available in regular knit wrist style (No. F400) and in 12" (No. F401) and 14" (No. F402) gauntlet styles.
FOR FULL INFORMATION WRITE TO:
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Watertown 72, Massachusetts
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HOOD INDUSTRIAL GLOVES
NEOPRENE • PLASTIC • RUBBER
Circle Item No. 34—Reader Service Card

BERYLCO TOOLS will save you one

Today's plant engineer always puts safety near the top of any list. He knows that modern tools . . . made of low-cost **beryllium copper** . . . will put an end to spark threats. No chance of costly fire and explosion. Added value: these up-to-date tools are non-magnetic and can never corrode. Workers like their strength and handling ease.

Safety Tool Division, THE BERYLLIUM CORP., P.O. Box 1462, Reading, Pa.

Send me free copy of your new safety tool catalog. Include name of my distributor.

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Safety Library

—*From page 68*

Industrial Medicine. January 1959. pp. 23-39.

Visual Aids

"A Comparison of American and British Visual Aids for Safety Training." Christina Allen. *The British Journal of Industrial Safety*. Winter 1958, #146. pp. 148-150.

Welding

"Safe Practices for Inert-Gas Metal-Arc Welding." *The Tool Engineer*. April 1959. p. 138.

ADDRESSES OF MAGAZINES MENTIONED

Readers are asked to send their requests for copies of magazine articles to the publishers. The NSC Library is unable to fill such orders.

A.M.A. Archives of Industrial Health, 535 N. Dearborn St., Chicago 10.

American Journal of Public Health, 1790 Broadway, New York 19.

American Machinist, 330 W. 42nd St., New York 36.

British Journal of Industrial Medicine, Tavestock Square W. C. 1, London, England.

The British Journal of Industrial Safety, 52 Grosvenor Gardens, London, S. W. 1, England.

The Central Constructor, 707 Keo Way, Des Moines, Iowa.

Electrical Engineering, 33 W. 39th St., New York 18.

Engineering and Mining Journal, 330 W. 42nd St., New York 36.

Fire Engineering, 305 E. 45th St., New York 17.

Grinding and Finishing, Hitchcock Publishing Co., Wheaton, Ill.

Hospitals, J.A.H.A., 840 N. Lake Shore Drive, Chicago 10.

Industrial and Engineering Chemistry, 1155 Sixteenth St., N. W., Washington 6, D. C.

Industrial Medicine and Surgery, 400 S. W. 69th St., Miami, Fla.

The Magazine of Standards, 70 E. 45th St., New York 17.

The Management Review, 1515 Broadway, New York 36.

Mechanization, Munsey Building, Washington 4, D. C.

Mental Hospitals, 1785 Massachusetts Ave., N. W., Washington 6, D. C.

Modern Sanitation and Building Maintenance, Powell Magazines, Inc., Easton, Pa.

Noise Control, 1278 Massachusetts Ave., Cambridge 38, Mass.

The Plant, Plant Publishing Co., St. Joseph, Mich.

Pulp and Paper Magazine of Canada, National Business Publications, Gardenville, Que., Canada.

Refrigeration, 1070 Spring St., N. W., Atlanta, Ga.

Supervision, 404 N. Wesley Ave., Mount Morris, Ill.

Textile World, 330 W. 42nd St., New York 36.

The Tool Engineer, 10700 Puritan Ave., Detroit 38.

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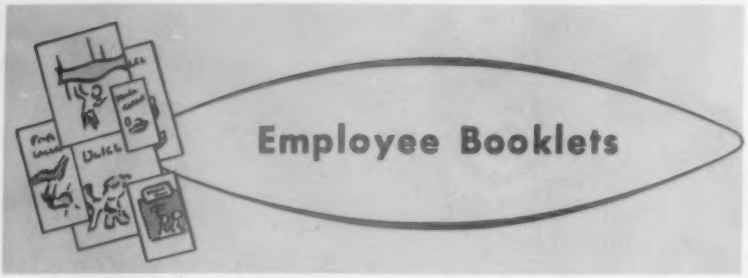


Employee Booklets

EMPLOYEE education booklets are a basic part of your safety program. The National Safety Council publishes a wide variety of such booklets which can help shape sound safety attitudes or instruct your employees in the safe practices related to their work or off-the-job activities. Sample copies of recent booklets are available by circling the key number of the ones you want on the Reader Service Card at the back of this issue.

YOUR FUTURE—KEEP IT CLEAN

A booklet dealing with the problem of housekeeping in the plant. Colorful cartoons with breezy captions build a strong case for good housekeeping. Teaches workers that a clean, well-kept plant is a more pleasant place to work in—and safer. Stock No. 195.79. Eight pages, 3½″ x 6¾″, full color illustrations. **Circle No. 503—Reader Service Card.**

WHAT TO DO ABOUT HOME INJURIES

A valuable reference book covering the prevention and emergency treatment of most home injuries. A must for every home. Easy to read, illustrated, the booklet is approved by the American Medical Association and the American National Red Cross. Stock No. 599.64. Thirty-six pages, 5½″ x 8½″, two-color illustrations. **Circle No. 504—Reader Service Card.**

SAFE AT HOME

A booklet that asks "How Safe Is Your Home?" Explains how to make any home safer, covering virtually every aspect of family safety. An up-dated edition of an older, highly popular Council booklet. Illustrated with photographs. Stock No. 599.61. Sixteen pages, 3¾″ x 8″, printed in two colors. **Circle No. 507—Reader Service Card.**

THE PROFESSIONAL TOUCH

"Professional drivers are made—not born!" and this booklet shows how the average driver can acquire the techniques used by the "pros" to avoid accidents. A valuable booklet both for commercial drivers and passenger car drivers of all ages. Amusing illustrations. Stock No. 294.08. Twelve pages, 3¾″ x 8″, printed in two colors. **Circle No. 509—Reader Service Card.**

ARE YOU SAFETY MINDED?

An amusing "rogue's gallery" of cartoon characters representing "types" of unsafe workers. An effective way to reach employees having the same attitudes and ways to help change them. Stock No. 192.15. Sixteen pages, 3¾″ x 8″, full color illustrations. **Circle No. 510—Reader Service Card.**

CHILD SAFETY IN THE DANGEROUS YEARS

A lively multi-colored booklet which discusses what parents can do to keep children safe and presents a check list of household booby traps for infants through 9-year-olds. Stock No. 599.35. 12 pages, 4″ x 8¼″, full color illustrations. **Circle No. 511—Reader Service Card.**

TIME FOR FUN

"Careless driving is just a lot of waste motion," this new vacation safety booklet advises. Its purpose is to help bring your employees back from vacation safe and sound. In addition to safe driving, it covers safety in swimming, boating, fishing, and camping. Stock No. 194.38. Eight pages, 3¾″ x 8″, full color illustrations. **Circle No. 512—Reader Service Card.**

For information on other Council employee training publications write to National Safety Council, 425 N. Michigan Ave., Chicago 11.

Hospitals on Wheels

—From page 72

and assorted tools. Our ambulances also carry carbon dioxide and vaporizing liquid fire extinguishers to put out electrical and gasoline fires, plus flares for night highway accidents, an automatic tourniquet, and other gear.

Training. Fifteen ambulance drivers and 14 ambulance helpers share the job of operating the ambulances. These men are highly trained and instructed in ambulance work and first-aid methods. All other personnel at the garage receive intensive instruction in ambulance work, so we are assured of ample coverage under any circumstances. As a result of this training, any garage personnel can be in action in less than a minute.

Our training course takes 100 hours a year with emphasis on oxygen therapy and the handling of fractures, in addition to the usual first-aid rescue work. The medical staff of the Milwaukee County General Hospital plays an important part in the training. The effectiveness is indicated by the fact that since 1950, it has not been necessary to take an intern or a resident along on ambulance runs. The men sometimes stay with the patient and assist the physician on arrival at the hospital.

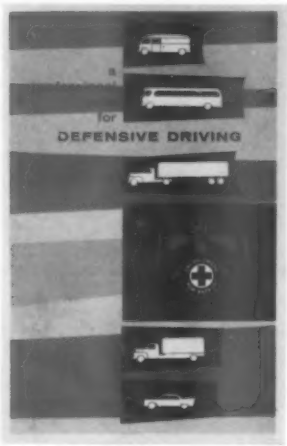
These men are hired through a civil service examination which consists of a written test, a driving test, and an oral interview. Candidates who pass the examination are sent to the Central garage for final screening.

To be accepted, the men must possess: considerable skill in the operation and driving of automobiles or ambulances, ability to make necessary road repairs, thorough knowledge of traffic regulations and the geography of Milwaukee County, good health, good judgment, and dependability.

Incidentally, in addition to the 10 ambulances, the Central Garage maintains 25 sheriffs' motorcycles and 42 squad cars, 42 department cars, 8 station wagons, 2 buses, 67 trucks, 3 fire engine pumpers, a 100-ft. aerial ladder truck, as well as county-owned road and construction equipment and several civil defense mobile vehicles.

WHAT'S NEW
IN NATIONAL SAFETY COUNCIL SERVICES*

*Look to this page each month for latest news about NSC services. Use the Reader Service Card (opposite back cover) to obtain sample copies of those publications showing a Reader Service Card number. For additional information on publications shown, write to Membership Service Division, National Safety Council, 425 N. Michigan Ave., Chicago 11.



Defensive driving

NO OTHER form of transportation makes such heavy and continuous demands on the skill and alertness of the operator as does motor transport. The professional driver must meet the hazards of his job alone and unaided.

To help the millions of professional drivers who must constantly make decisions behind the wheel, the National Safety Council has published a new booklet, *A Professional Code for Defensive Driving.*

The colorful, 20-page publication is dedicated to the professional driver, "who developed and refined the concept of defensive driving as his approach to the hazards of the highway."

"Defensive driving," the booklet points out, "is a formula for avoiding accidents. It is a state of mind. It is the professional driver's safety code of the road."

A single sample of *A Professional Code for Defensive Driving* is available.

Stock No. 294.09. Circle No. 514, Reader Service Card.

Revised data sheets

FOR those who want to keep their files of data sheets up to date, we announce the following data sheet revisions: *Hard Hats*—320; *Spreading Rubber Cement*—334; *Barricades and Warning Devices for Highway Construction Work*—239, *and Liquid Oxygen*—283. The *Liquid Oxygen* revision appears in this issue of NATIONAL SAFETY NEWS on page 37.

New printing of best-selling employee booklet

A NEW printing of our most popular and successful training booklet—*What's In It for Me?*—is now available.

More than a million copies of the booklet have been distributed to industrial employees.

The publication lays all the cards on the table. It takes a good, hard look at the whole idea of safety—strictly from the worker's point of view.

It shows how the worker, more than anyone else, stands to profit from a good safety record, and it explains management's motives in a forthright way. No magic formula in the booklet—just straight-from-the-shoulder common sense.

A free copy of *What's In It for Me?* is available.

Stock No. 192.09. Circle No. 513, Reader Service Card.

For a More Successful Poster Program

POSTERS illustrated on the following pages are new, and actually are printed in two or more colors. NOTE: (1) The new 1959 poster directory is also available—with a wide variety of subjects. Stock of those directory-listed posters will be available at least until October 1, 1959. (2) Most posters appearing in NATIONAL SAFETY NEWS in 1959 will be stocked throughout the year.

JUMBO POSTER FOR AUGUST 1959

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

SAFETY BANNER FOR AUGUST, 1959

Here is the attention-getting, monthly cloth banner. Available in two types —indoor and outdoor—both are identical in size (10 feet long by 40 inches high), have the same general message and multi-color design, indoor type is of sturdy drill with grommets for easy hanging, while the outdoor banner is of extra heavy drill with wind vents, and has strong stitched-in rope for durability.

1609-A **8½x11½**

This new four color poster is illustrative of the 72 four color posters shown in the 1959 Poster Directory.

NATIONAL SAFETY COUNCIL

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)

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1622-A 8½x11½

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1475-B 17x23

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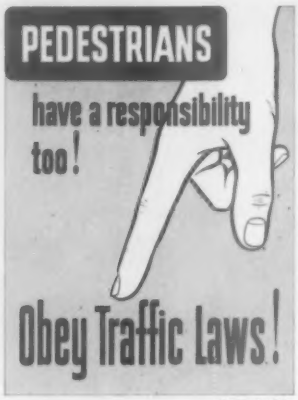

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T-1619-B 17x23

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T-1617-A 8½x11½
T-1618-C 25x38

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V-1661-A 8½x11½

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V-1659-B 17x23

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1-9	—	—	—	$.40
10-99	$.12	$.23	$.20	.30
100-999	.07	.195	.165	.24
1,000-4,999	.06	.155	.132	.22

Prices subject to 10% discount to members. With all orders of less than $3.00 please enclose check or money order.

Quantity	Poster No.	Quantity	Poster No.

ADDRESS ORDER TO: NATIONAL SAFETY COUNCIL, 425 N. MICHIGAN AVE., CHICAGO 11, ILLINOIS

Electrotypes can be furnished for all posters illustrated above.

Off the Job

—From page 56

billion dollars on boating last year. There are 357,000 small boats in California; 407,000 in Michigan; 514,000 in New York. Wyoming and Nevada have low totals—7,000 apiece. New Jersey has 169,000 boats (and had 13 fatal accidents on water last year).

The chief of the Bureau of Navigation has appointed 270 harbor masters with books and summonses, to patrol the waterways. Bishop asks:

What can they do with a pilot who causes accidents? He doesn't need a pilot's license. He takes no road tests. He studies nothing of safety on the water. All he has to know is how to gas her up and open the throttle.

The state of California is progressive. There all boats, no matter how small or large, must be registered annually. The next step is to license all pilots, as all automobile drivers are licensed. It will come.

Issue New Index of American Standards

The 1959 *Price List and Index of American Standards* recently published is available free from the American Standards Association, Dept. PR 66, 70 East 45th Street, New York 17.

This publication lists the more than 1,800 American Standards approved to date by the American Standards Association.

Fields covered include: automotive, chemical, civil engineering and construction, commercial standards, drawings, symbols and abbreviations, electrical engineering, ferrous materials and metallurgy, materials handling, mechanical engineering, mining, nonferrous materials and metallurgy, nuclear, office equipment and supplies, photography and motion pictures, pulp and paper industry, rubber, textile industry, wood industry, industrial safety, highway safety, and consumer goods.

Also included in the new index are the international standards recommendations published by the International Organization for Standardization and the International Electrochemical Commission.

ARE YOU DEMANDING *the* BEST *for face protection?*

Monarch® Model F-506

Model F-300's smaller window is also interchangeable with a gas welding front! Has most of the features listed below.

you get THE MOST *from* Monarch®

WHEN YOU BUY... *check these features!*

1 RUGGED CONSTRUCTION for Full Protection
2 EXTENDED OVERHEAD PROTECTION with Full Ventilation
3 PRE-FORMED WINDOWS 9¼" x 19", or 24-Mesh Steel Screen
4 *QUICK-LOK* Attachment enables use of *SuperGlas* or *SuperLite* (Aluminum) Safety Cap
5 "Floating" Headgear with Ratchet Headsize Adjustment (Patented), NO HAIR PULLING
6 Leatherette or Genuine Leather Sweatband
7 Heat-resistant, full-gage, formed Vulcanized Fibre Deflector
8 Snap fasteners attach windows at rabbeted deflector edge with its dust-light seal
9 "Up" or "Down" positions of Face Shield easily set on adjustable friction joints

A REAL *face saver!*

These Monarch® Face Shields by Fibre-Metal give wide face area protection and head protection with extreme comfort and convenience. Construction is precise and rugged...to give long life under hard work conditions. Special features and accessories make Monarchs the most used and most versatile face shields on the market. ***Get our Catalog No. 26! Ask your Welding & Safety Distributor!***

The FIBRE-METAL Products Company | CHESTER PENNA.

In CANADA: Fibre-Metal (Canada) Limited, Toronto

Circle Item No. 37—Reader Service Card

Know Your Tranquilizers

A broad spectrum drug such as a tranquilizer, if misused, could result in a broad spectrum of misery ranging from loss of production efficiency to severe or fatal injuries

A RECENT ARTICLE in the *New England Journal of Medicine* (Vol. 260, No. 15) pointed out that tranquilizer drugs reached a $175 million sale in 1958, outdistanced only by vitamins and antibiotics in therapeutic use.

What is more important; "the drug can well mask underlying disease—is expensive, too toxic, and too limited in value to serve as a continual crutch, and their use as such is poor therapy, and in some patients may be fraught with danger."

There are many tranquilizers on the market in the form of central nervous system suppressors by the effect on the brain; depleting of certain amines from the brain stem with lowering of "motor" activity; common sedatives with the usual sedation effect; others falling into a grouping classified, as are the time-honored sugar pills, of psychic value only.

Epsom salts is quite an innocent compound drug, most innocuous by itself; but Epsom salts given for an acute appendiceal attack is dynamite. Certain tranquilizers prescribed by your physician in proper dosage are most beneficial; taken blindfolded can cause excessive nasal congestion leading to severe nose bleeding and persistent coughing, reactivation of a healed stomach ulcer with severe hemorrhage, insomnia, and chronic fatigue. There are cases reported of severe mental depression with suicidal dangers.

As the article in the *New England Journal* pointed out; it may take many weeks after stopping certain tranquilizer drugs before recovery is made. Some patients sensitive to the drug develop a temporary loss of control of fingers and thumb, causing them to beat against each other in a pill-rolling fashion of Parkinson's disease or shaking palsy. Oddly enough, the bite of a black widow spider will often cause this same nervous system phenomenon.

Any widely-used drug that can cause chronic fatigue, muscle pain, mental depression, twitching of fingers, nasal congestion, or severe bleeding from nose or stomach, should be brought to the attention of industry. From a safety program angle, it is quite obvious that secondary effects could result in a broad spectrum ranging from loss of production efficiency to severe or fatal injuries. In all probability many apparently careless automobile accidents could well stem from misuse of improperly consumed tranquilizer drugs.

Cases have been reported of certain people, hypersensitive to aspirin; having repeated intestinal bleeding requiring a most extensive (and expensive) workup to rule out cancer of the small intestine or other major pathology. These cases are rare.

The majority of patients using the Rauwolfia type of tranquilizers, under guidance of their family doctor, will have beneficial results. However, such a drug used with the nonchalance of aspirin can well do much harm, particularly if it becomes a fixed habit or routine safety valve to replace much-needed sleep, curbing of a too-active social calendar or improper work adjustment.

For bona fide hypertensive cases, deep-rooted severe anxiety patterns, or psychotic patients, the correctly prescribed and checked tranquilizer drug is of paramount benefit.

By N. GILLMOR LONG, M.D.

Medical Director, Lumbermen's Mutual Casualty Company, Chicago; Member, Medical Advisory Committee, National Safety Council.

COMING EVENTS

in safety and related fields

June 11-13, White Sulphur Springs, W. Va.
Eighty-seventh Annual Meeting of Manufacturing Chemists' Association. (The Greenbrier.) Charles E. Wallace, Manufacturing Chemists' Association, Inc., 1825 Connecticut Ave., N.W., Washington 9, D. C.

June 16-17, Bridgeport, Conn.
Fourteenth Annual Connecticut Industrial Safety Conference. (University of Bridgeport.) Nell Short, 15 King St., Wallingford, Conn.

June 18-20, Gatlinburg, Tenn.
The Health Physics Society's Fourth Annual Meeting. G. T. Saunders, Kewaunee Mfg. Co., Adrian, Mich.

July 29-30, Brisbane, Australia
1959 National Industrial Safety Convention and Exhibition. (City Hall.) J. E. McDonnell, secretary, National Industrial Safety Convention and Exhibition, P.O. Box 27, Brisbane-North Quay, Queensland, Australia.

Sept. 9-10, Harrisburg, Pa.
Pennsylvania Dept. of Labor and Industry Occupational Safety Conf. William L. Batt, Dept. Secretary, chairman, Room 1700, Labor and Industry Bldgs., Harrisburg.

Sept. 9-10, Baltimore, Md.
Governor's Annual Safety-Health Conference and Exhibit. (Hotel Emerson.) Joseph A. Haller, executive chairman, Safety Conference, Dept. of Labor and Industry, State of Maryland, 12 E. Mulberry St., Baltimore 2, Md.

Sept. 17-18, Rockland, Maine
Thirty-second Annual Maine State Safety Conference. (Samoset Hotel.) Arthur F. Minchin, secretary, Dept. of Labor and Industry, State House, Augusta, Maine.

Sept. 22-24, New York City
Fourth Annual Industrial & Building Sanitation-Maintenance Show and Conference. (New York Trade Show Building and New Yorker Hotel.)

Defense Weapon

The telephone is a defense weapon —and an important one.

A manufacturer of rockets, for example, needs data or delivery on a specific part. He picks up his telephone, makes several Long Distance calls, and his problem is solved.

An unidentified aircraft is detected in flight by a radar installation. The information is relayed automatically and instantly over telephone cables to a defense center.

It is then flashed over the network of special Bell System telephone lines which link the country's entire system of continental defense.

The role of the Bell System does not stop there or with the thousands upon thousands of calls that are a part of the manufacture of countless items of defense.

Its Bell Telephone Laboratories are engaged in many important research and development projects for the government. These include the Nike Zeus anti-missile missile system and the guidance system for the Titan intercontinental ballistic missile.

Western Electric, the Bell System's manufacturing and supply unit, is producing the guidance and control equipment which is the heart and brains of the mighty Nike Ajax and Nike Hercules missile systems.

The Sandia Corporation, a subsidiary of Western Electric, continues to manage the Atomic Energy Commission's Sandia Laboratory, which develops, designs and tests atomic weapons.

Among many other Western Electric defense projects were the 3000-mile Distant Early Warning (DEW) Line in the Arctic and the "White Alice" communication system linking population centers and military installations in Alaska. Both were completed on schedule and turned over to the Air Force.

Another project for the Air Force was the design, production and supervision of installation of a communications system for a guided missile test range extending out to sea.

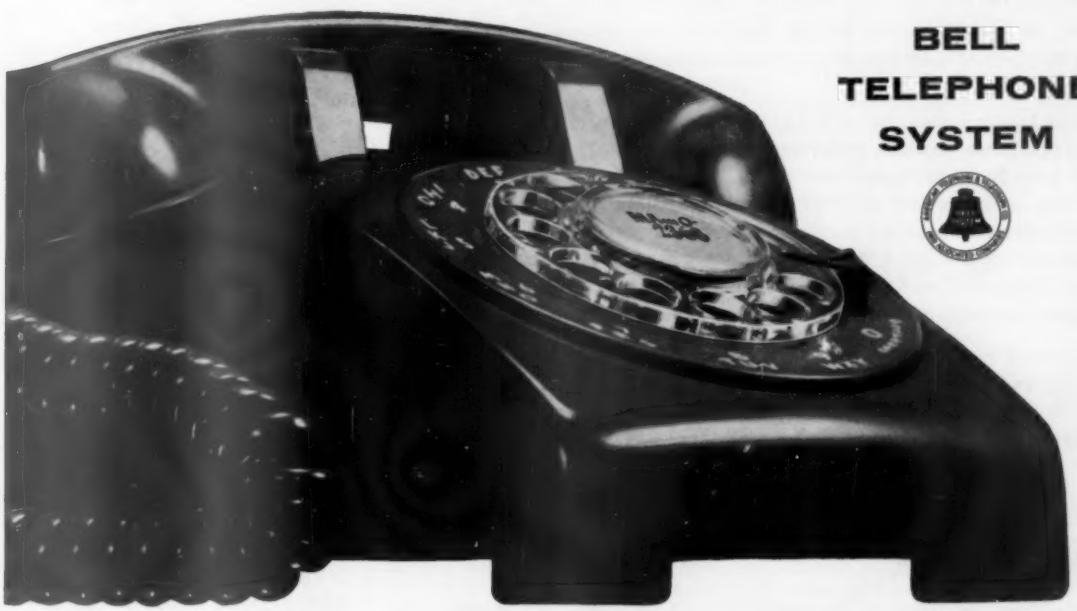
The backbone of this system is the special underseas cable that stretches 1370 nautical miles from Cape Canaveral in Florida to Puerto Rico. It provides an instant, secret, weatherproof means of transmitting data on missiles in flight.

Radar installations along the way spot the missile's flight position which is flashed continuously to the testing base by cable. So are signals from the missile itself.

Recently the U.S. Air Force asked us to add the communications phases of a ballistic missile early warning system to the other military projects handled by the Bell System.

The Bell System is primarily engaged in providing telephone service. But it gives top priority and its utmost effort to the needs of Government whenever it is called upon for work for which it is specially fitted by size and experience.

Particularly when it comes to protecting the country, it's good to use the best scientific knowledge available in the communications field.



BELL TELEPHONE SYSTEM

NEW FROM KIDDE!

2½-gallon pressurized water

2½-gallon anti-freeze (loaded stream)

The easiest-to-operate portable fire extinguishers on the market today!

Here, for the first time, is a practical, sensible design for pressurized water and loaded stream extinguishers. No inverting, no bumping, no valves to turn, no pins to pull (safety lock automatically releases when nozzle removed).

These two new stainless steel Kidde portables feature simple, one-two operation—just aim at fire and push the button. Notice the way the hose is stored, safely out of the way. Notice the wide-open handle—to insure fast action even in gloved hands. Notice the dust-and-waterproof pressure gauges—which show at a glance whether the units are fully charged. All of the features—plus the slim design and light weight of these Kidde portables—make them the easiest-to-store, easiest-to-carry, easiest-to-operate portables on the market today.

Approved by Underwriters' Laboratories. Available in pressurized water for fires in ordinary combustibles, or anti-freeze loaded stream for fires in ordinary combustibles and flammable liquids. For more information, write to Kidde today.

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Circle Item No. 38—Reader Service Card

Good Safety Attitudes

—From page 23

Case III. While an employee on a company business trip was in a restaurant during a lunch stop, the train started without warning. When he reached it, the train was going 20 mph. The car platform was down, the lower half of the door closed, and the conductor was shouting and waving him off. But he tried to board the train. He fell between the rail and station platform and was crushed to death.

This case involved *panic-type emotions* which overrode the victim's normal sensory perceptions. He apparently did not see the car platform was down, the lower door closed, or hear and see the conductor, nor realize the speed of the train, even though he had at one time worked on a railroad.

Turn now to psychological situations and factors underlying attitudes. It is only when we know and understand the real facts about what makes attitudes click or not click that we can do a realistic job of developing and maintaining them. It's much easier, if you just talk about attitude in a general way, and then list and discuss some of the accepted procedures. But knowing them is not enough; it is full understanding that gives the magic touch and power, when it comes to attitude.

I should tell you what I overheard some of my college students say about the psychology of attitudes. This dialogue took place outside the door of my classroom:

"So long, Joe, I'm due for my injection of 'HAT'."

"Your what?"

"H-A-T, HAT—Hannaford Attitude Theory."

"Oh, yeah, I've had it—it's not too bad when he uses a sharp needle."

So let's try on the "HAT" and see how it fits.

It is only logical that we first give our attention to what attitude is composed of. It has three components:

Attitude = learned responses + habit + emotional set.

Emotional Set

This figures, because as we defined attitude, it was a readiness to

respond. Emotional set also is very important. The emotional content of attitude is often more important than facts, logic, and habits. This is because emotions are so much older in human experience than learned responses.

If we were going to be psychologically technical about it, we would say emotions are philogenetic —that is, they have their origins in the deep, distant past, and our basic emotional reactions are part of our inherited endowment. At least, they are much more strongly philogenetic (instinctive) than our learned responses.

This does not mean that learned responses and habit are not important. They are important. There must be learned responses fixed by habit and ready to go into action when our emotional set says, "get busy"; otherwise, confusion and trial and error, with its high accident potential, is all that is triggered.

One of nature's most fundamental laws is "nature abhors a vacuum." In building attitudes, it is important that the proper conditioning take place, so there will be a readiness to respond safely and effectively when emotional set gives the kick that puts the attitude *into orbit*.

There are three psychological, or living situations under which attitude is forced to operate. See Fig. 1 "Types of Attitude Situations."

In ordinary day-to-day living situations, the great majority of the things we experience can be met safely and effectively, if our attitudes are right, or good. These are our so-called long-term safety attitudes.

In Fig. 1 they are Case I situations, like that in which the boy who stepped off the table lost his finger. There was no undue emotional content. If the learned responses acquired through proper training on the job had been reinforced by habit and given the right degree of emotional set consistent with a good safety attitude, this accident would not have happened. If this were not true, none of us would survive for long.

The second living situation in which attitudes have to operate is one where there is passing emotional upset of a non-panic type. Here the emotional overlay of the situation presents an added prob-

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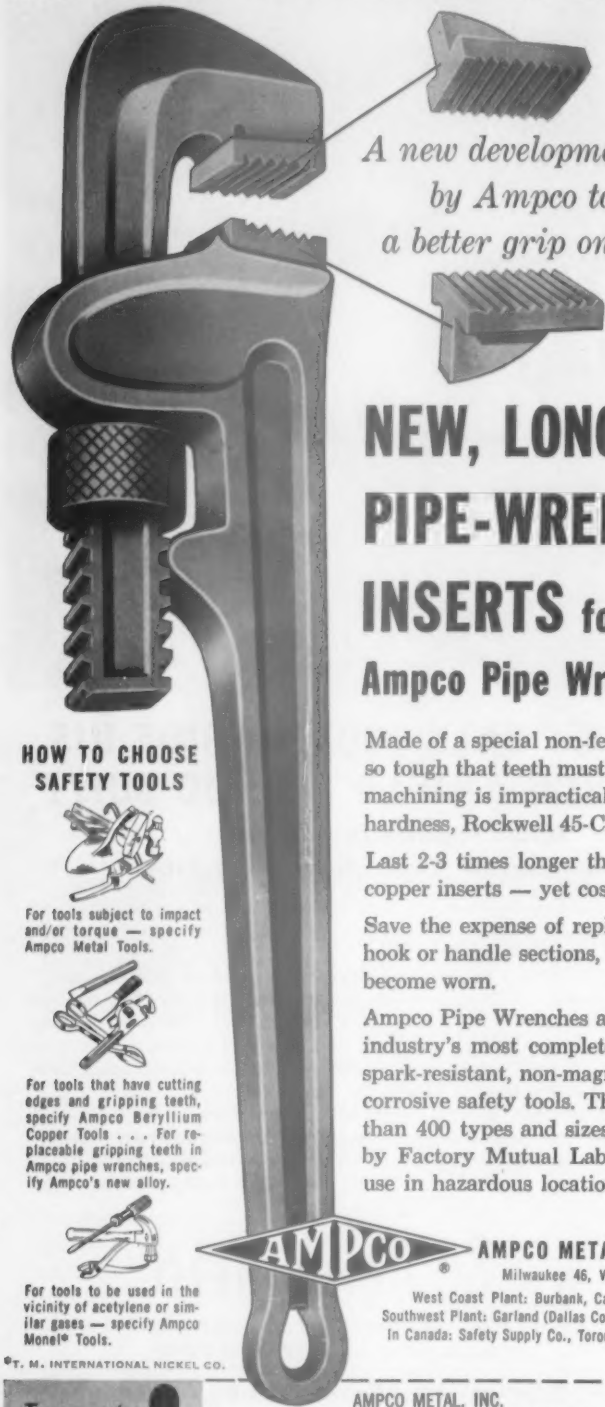

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lem for the good attitude to handle.

Since our sensory perceptions are not disabled in such a situation, a good attitude, when properly developed and maintained, can be further strengthened to override the added emotional overlay and trigger a safe response.

This is the Case II type of situation in which the boy lost part of his finger in the meat grinder. He was operating OK psycho-physically and performing the job operations. But the learned responses, habit, and the emotional set of the attitude were not strong enough to provide a readiness to respond effectively and safely under the added emotional stress.

Attitudes can be so developed and maintained that they will provide a readiness to respond safely in most of these Case II situations. As we can see from the diagram, the exact line between Case II situations in which the emotional upset is of the non-panic type, and the panic-type situation in which sensory perceptions are disabled, is actually a sort of in-between area. We can't be sure when one turns into the other.

Remember Case III? That's the one where the man was killed trying to board the train in spite of all indications to the contrary. In panic-type situations, in which sensory perceptions are temporarily disabled, good safety attitude has a terrific amount of opposition. The emotional overlay is very heavy.

A broader and, perhaps, different look at the problem may be worthwhile. At the top of Fig. 2 we have "Attitude." This is composed of learned responses, habit, and emotional set.

Next we have the word "attitude" with the word "emotions" over it. This depicts the situation in Case II type accidents, where attitude is hidden behind a screen of emotions and must be strong enough to fight its way through.

Finally, we have the word "attitude" with "emotions" over it and "panic" over both words. Attitude is pretty dimly seen through emotions and panic. In fact, in deep panic situations, it is doubtful whether the hysteria resulting from the emotional overlay can be offset by good attitude alone.

Since sensory perceptions are disabled, other measures providing for

a different type of control may be indicated, when it is possible to provide them.

Thus, learned responses based on the physical senses, logic, and habit underlie the readiness to respond in all attitude situations. Our long-term basic attitude has little, if any, emotional overlay. The emergencies involving passing emotional upset of the non-panic type have an emotional overlay which can override the learned responses.

However, our learned responses are still operative to a degree where people can be conditioned to respond effectively and safely. In the panic-type situation, the emotional overlay is so great relative to the learned responses that their impact is largely weakened or completely deadened.

I am withholding specific practical plans and procedures until later. Now, I want to list general items in job climate (over-all emotional conditioning in an organization) that affect this important emotional set component of attitude.

Here are typical situations which exist in some companies and which tend to make some employees tense, confused, anxious, frustrated, hostile—and even alcoholic:

Lack of effective job training.

Incompetent, untrained supervisors.

Lack of clearly-stated company policies and procedures, including safety policies.

Warring departments or key individuals at odds with one another.

Vacillation on the part of management.

Multiple bossism (when an individual is given orders, sometimes conflicting, by two or more superiors).

Criticisms made in public.

Displays of favoritism.

Accountability and responsibility without commensurate authority.

Arbitrary decision affecting the individual.

Safety programs which do not provide for development of good safety attitude.

Political promotions.

Gross inequities in compensation.

Inattention to grievances, real or fancied.

I prefaced this list with the words "which tend to make some employees tense, confused . . ." Some persons' personality make-up makes them easier victims to emotional upset than others. However, as

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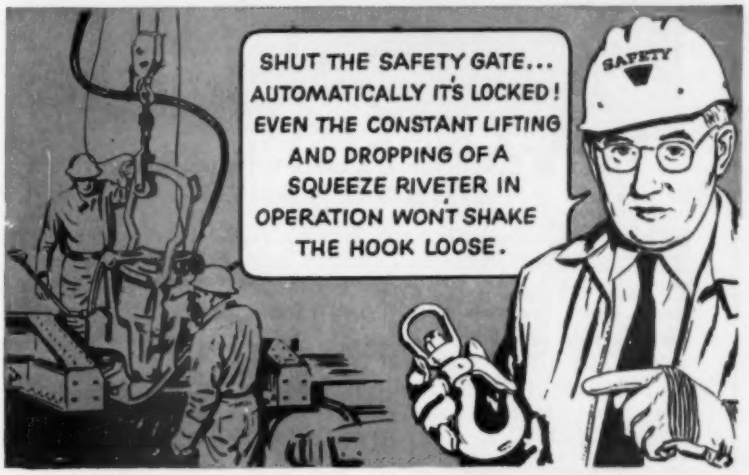
says Safety Engineer, Frank Treadway of General American Transportation Corporation, Plant 1, East Chicago, Indiana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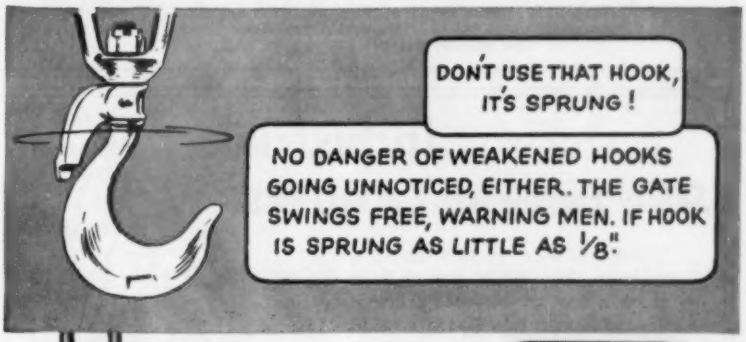
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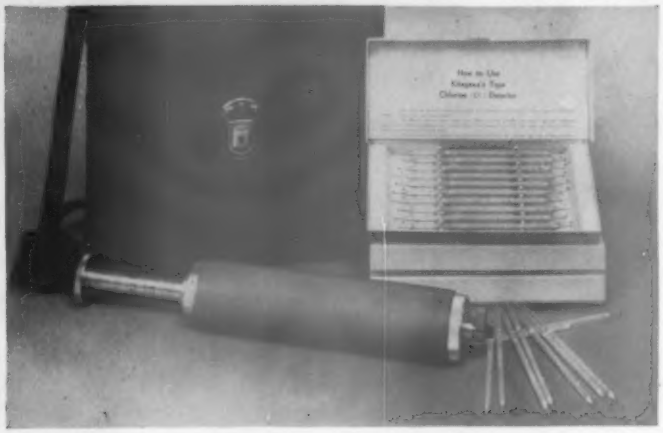

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Cat. # 122 Ethylene Oxide
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we have heard, *continual dripping weareth away stone.*

We have defined safety attitude as "the readiness to respond effectively and safely, particularly in tension-producing situations." Don't confuse the "readiness to respond" with the actual action which takes place. Readiness is not always converted into the desired action.

Look briefly at how attitude functions in motivating actual action—how we humans translate an attitude into action.

From a purely functional standpoint, attitude is composed of three things:

$$\text{Attitude} = \begin{cases} \text{Attention} \\ + \\ \text{Memory} \\ + \\ \text{Emotional Set} \end{cases}$$

To give an attitude a chance to function in a situation, the individual must be so conditioned by the attitude that it gains his attention. This can happen voluntarily or involuntarily, as a result of the habits formed by training, i.e., learned responses.

Once his attention has been focused, his memory must tell him what to do. The learned safe response must have made an impression so there will be recognition and recall of what to do.

Whether he takes the action depends on the individual's "emotional set." That is the action-triggering factor.

The emotional set component of attitude is doubly important. Emotional set appears as a component of the attitude and also as the activating factor in the functioning of attitude. It is the bridge to action. Unless the learned responses which the emotional set triggers are well developed and ready, there will only be confused, random, hit-or-miss action.

Figure 3 illustrates these points.

Emotional Set is like the fuse to a stick of dynamite; it triggers the action.

Attention is the primer or cap that calls forth the learned safe response.

Memory is the learned safe response that does the work; it is the explosive force of the dynamite.

Emotional set plays a controlling part in what makes up our attitudes,

as well as in their conversion into action.

This is not strange because, as we observed earlier, emotions are much much older in man's experience than the learned responses of physical senses, logic, and habits.

In Case I where the man lost his finger, attention to the job hazards and memory of the safe practices would have their roots in the learned responses based on training and supervision. These would have to be triggered by a correct emotional set; however, the fundamental attitude needs were learned responses.

Case II was the one in which a passing emotional upset overrode learned responses and a normally good emotional set. Here the learned responses were not reinforced strongly enough by habit to become automatic, possibly because of lack of correction in previous violations, and certainly because the emotional set for safety was not strong enough. The victim's physical senses and learned responses were still operative, if attention and memory could have been triggered by the situation.

In Case III, where the man was killed attempting to board the train, the obvious factors of train speed, lowered platform, closed door, and conductor warnings failed to get his attention. Memory of safe action remained untriggered. Since panic-type emotion prevailed, the only hope lay in an emotional set for safety which would be strong enough to be controlling by operating before panic and hysteria took over.

We must take four steps in forming attitudes or revising old ones. Psychologists call them the "Genesis of Attitudes." These steps are:

Step I Laying the foundation for the attitude.

Step II Personalizing the attitude for the individual.

Step III Fixation of the attitude—emotional set.

Step IV Keeping the attitude alive.

Attitudes are built; they don't just happen suddenly. Their fixation—the setting home emotionally—can happen suddenly and usually does.

Laying the foundation consists of getting many favorable or un-

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favorable responses from the individual—or subjecting him to them. The TV or radio commercial mentions the name and excellence of a product as many times as possible in a single announcement during a program and follows it up day after day. Mass media, such as safety posters, slogans, or movies, can be used for Step I. From the physical sensory side we can use training in the safe, correct way to do the job—the formation of habits and involuntary responses.

Personalizing it for the individual requires his identifying *himself* with the attitude. It must be accepted as being useful and meaningful in terms of his needs and wants.

Attitudes are retained only as long as they yield personal satisfaction.

Participation is essential and is most effective on an individual basis. Safety meetings, safety inspections, competitions, and job operations are all participation. Good supervision that does not let violations of safe working practices go unnoticed and uncorrected also involve participation, as do recognition of his personal contributions by authority and prestige figures, the boss, his family, and fellow workers.

Fixation of the attitude is the key that gives it the "readiness to respond." It is emotional in content. He suddenly realizes his drive to use it. All things he has experienced in Steps I and II become real living things rather than ideas, words, or actions that he passively agrees with.

The person who has had a serious accident often acquires and shows a good safety attitude. Whether he can respond effectively and safely depends largely on whether he has the means to do so. Steps I and II give him this.

It is difficult to gauge what has the specific emotional content to fix the attitude for each individual. Participation is an important factor.

We've all heard the phrase—"Attitudes are caught as often as they are taught." Attitudes can be caught or adopted from prestige figures, authorities, or from the majority group. *But* it doesn't do much good unless a person has the know-how to put it into use. If Steps I and II are lacking, it's a doubtful victory.

It is unlikely that anyone's attitude about anything is ever changed, unless he experiences the thing himself. The experience may be physical, mental, or emotional, but there must be an "emotional set" taking place.

Discussion of actual accident cases involving the person's work, role-playing, demonstrations, participation in safety activities, contacts with authority and prestige figures and their pronouncements, all are good devices for the fixation step.

Because people in a company or group are in all stages of attitude development, we must design our programs to provide something for all. Some are in Step I, others II, III, or IV. Others may be slipping, since attitudes are retained only as long as they give personal satisfaction by meeting one's own needs.

Figure 4 outlines the use of practical safety program activities to build good safety attitudes. Beside each of the four steps in attitude formation, typical safety activities useful in achieving that step have been listed. There is some overlap; some items appear for use in more than one step, because they are structured differently when used in the different steps.

For instance, a motion picture can be of a general safety nature useful in Step I—laying the foundation for the attitude—or the film can be keyed to specific individual jobs making it useful in Step II—personalizing the attitude for the individual.

Among typical safety activities useful in achieving Step IV—keeping the attitude alive—is the checking on attitude status of individuals and groups through industrial safety attitude scales for employees and supervisors.

Studies have shown that, as the industrial safety attitude of male employees worsens, so does actual accident performance. The number of disabling injuries during the five-year period studied in my research, "The Significance of Industrial Safety Attitudes," correlated well with the industrial safety attitudes of the employees studied. The same general relationship held between industrial safety attitudes of male supervisors and disabling injuries occurring to employees they supervised.

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The results of this study, the scales, and the examiner's manual are now available. These scales provide a desirable tool for measuring attitudes of individual employees, supervisors, or groups of either type. The measurement of safety attitudes provides a check on the success or failure of our efforts to develop a good safety attitude. It also indicates where attention is needed.

Incidentally, the handling of panic-type situations is the most difficult of all. Panic-type emotions override and temporarily disable normal sensory perceptions. This was true in Case III, that of the employee who tried to board the train in the face of all contrary indications.

There are two main avenues of approach to the development of good safety responses in panic-type situations. First is that of giving the correct safety attitude and learned response such a high degree of involuntary performance and emotional set that the attitude will operate immediately when a panic-type emotional situation presents itself. This can be done. It is not usually possible without the practice of the desired response in advance.

We are all familiar with the repeated training given in military situations, so when under fire, men will tend to respond involuntarily. In the great majority of infrequent, unpredictable panic-type situations, such training is not possible.

All we can do is to give people, who may be exposed to such situations on the job, a strong emotional set for safety in the hope it will operate on an involuntary basis.

The second procedure is that of setting up training in the safe learned response for particular panic-type situations. Where the possibility of such situations exists to a sufficient degree, such training is definitely warranted.

A typical industrial situation of the panic-type occurs in research laboratories and in chemical industries where people may be splashed with caustics or acids. Emergency showers are provided. Unless training situations are developed in which employees—on signal—go to the nearest shower periodically, workers may pass up several showers in blind flight.

There are many other aspects of safety attitudes demanding attention, such as the revision of already-established attitudes and building them anew. Also there are the practical measures we can use in the development and maintenance of good safety attitudes.

In an age when people's minds are keyed to astounding developments in the physical and technical sciences—the age of satellites, moon probes, space travel, and probing the innermost secrets of the atomic nucleus—too little attention is being given to man. Unless we can learn and use the procedures necessary to develop and maintain sound emotional functioning, all other things will be for nothing.

It is the direct responsibility of safety engineers to see that the human and social aspects of life are not neglected. We must see that necessary research and practical applications in the field of safety are made, or we will be delinquent in our professional responsibilities.

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Fires Water Won't Quench

—From page 35

and can penetrate spaces difficult to reach. It can be applied to vertical and horizontal surfaces.

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It is not considered toxic, since it does not give off poisonous vapors and can be removed easily from the skin without undue harmful effects. When decomposed by the heat of a fire, it gives off clouds of white smoke, composed partially of boric acid. No symptoms have been reported from fire fighters using this liquid, but inhalation of the smoke should be avoided as much as possible until more is known about its effects.

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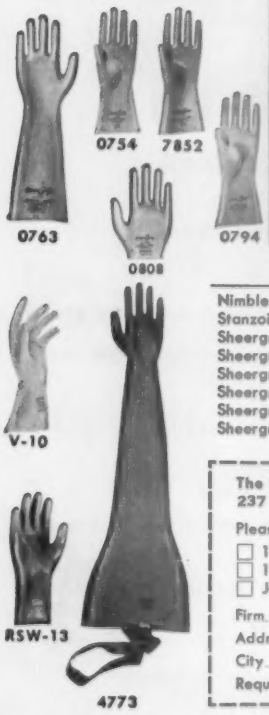

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JAMES F. HAMILTON, maintenance supt., Ethyl Corporation, Baton Rouge, La.—drowning.

DANIEL K. ROANE, student at Duke University and summer construction worker, Evanston, Ill.—drowning.

ROBERT J. LEAP, electrician, New Jersey Bell Telephone Company, Newark, N. J.—gas asphyxiation.

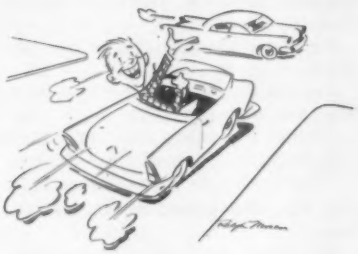
J. GORDON TAYLOR, manager of surplus equipment and materials, The Hydro-Electric Power Commission of Ontario, Toronto, Canada—drowning. Certificate of Assistance—MRS. MARY H. CROUCH.

UEL SAM ELLIS, leadman, Sohio Pipe Line Company, Norris City, Ill.—drowning. Certificate of Assistance—GENE A. SMITH.

WILLIAM F. MCINERNEY, PBX repairman, The Pacific Telephone and Telegraph Company, San Francisco, Calif.—drowning.

RALPH C. MATARAZZO, ordinary seaman, Military Sea Transportation Service, North Pacific Subarea, Seattle, Wash.—drowning.

Calendar Contest Winners For March



"....."

M. F. Miller (Individual Member), Winston-Salem, N. C., won the $100 first prize in the National Safety Council's "Safety Saying" contest with this line:

But his thinking's so MISHAPROPO!

The contest appears monthly on the back pages of the Council's calendar. The theme for the March contest was "Attitudes Can Kill."

Second prize of $50 went to Mrs. R. M. Boule of Balco Forest Products, Ltd., Heffley Creek, B. C., Canada. Her entry was:

To WIN, keep your PLACE, with less SHOW!

Harry Krysiak of Alpha Portland Cement Co., LaSalle, Ill., won third prize of $25 for this line:

Ho! Ho! Ho! Ho! Ho! Ho! Ho! Ho! O-O-Oh!

The 30 winners of $5 prizes are:

Mrs. Helen S. Stevens (Individual Member), New Orleans, La.

R. A. Rowley, Jr., Toms River Chemical Corp., Toms River, N. J.

Miss Ogla H. Brooks, Wisconsin Telephone Co., Madison, Wis.

John J. Sodofsky, Kuhlman Electric Co., Salinas, Calif.

Mrs. Norris T. Turnbull (Individual Member), Holcomb, N. Y.

Bernard Foley (Individual Member), Washington, D. C.

Miss Luella Varner (Individual Member), Iola, Kan.

Mrs. L. C. Van Brunt, Westinghouse Electric Corp., East Springfield, Mass.

Miss Thelma Alread (Individual Member), Hamilton, Ohio.

Miss Blanche M. Salmon, U.S. Treasury Dept., Washington, D. C.

Mrs. P. J. Nevin, Dept. of Public Works, Lowell, Mass.

Walter M. Sult (Individual Member), Berwick, Pa.

Miss Dorothy De Lay, David Berdon & Co., New York City.

Miss Dorothy Montgomery, Firestone Steel Products Co., Detroit.

Emory Boren, G. Kay, Inc., Fairmont, Neb.

Mrs. Jessie Belitsky, Goodyear Aircraft Corp., Akron, Ohio.

Harry Krug (Individual Member), Kansas City, Mo.

Miss Catherine Coonse, P. R. Mallory Co., Indianapolis, Ind.

Bill Heidbrink, Mobil Oil Co., Denver, Colo.

E. F. Baker, Continental Steel Corp., Kokomo, Ind.

Mrs. Geo. P. Kemptgen, Oliver Iron Mining Div., U.S. Steel Corp., Hibbing, Minn.

Miss Sarah Harwell, Moncrief-Lenoir Mfg. Co., Houston, Texas.

Mrs. Shirley H. Wilson (Individual Member), Thornton, Colo.

Miss Mary Jo Erhardt (Individual Member), Tulsa, Okla.

Mrs. Ingrid U. Cowan, Mississippi Chemical Corp., Yazoo City, Miss.

Mrs. Eunice A. Walker (Individual Member), Jacksonville, Fla.

Miss Donna Edwards (Individual Member), Decatur, Ala.

Mrs. Neil Farnham (Individual Member), Portland, Ore.

Paul L. Johnson, Dept. of Education, Baltimore, Md.

Mrs. A. Anderson (Individual Member), San Francisco.

OIL-COVERED AND DOWNHILL ...STILL NO ACCIDENT

Get Lasting Protection Against Slipping with Alcoa Abrasive Tread Plate

Disaster no longer lurks on the oil-splattered floor of this vital production area. Alcoa® Aluminum Abrasive Tread Plate makes sure it never gets a chance to strike—no matter how wet, oily or greasy the floor becomes. Made with tough particles of fused aluminum oxide, its hard, abrasive surface offers complete slip-proof protection. Lighter weight makes it easier to install. Corrosion resistance means virtually no maintenance. Longer, safer protection is assured, because wear serves only to renew the surface by uncovering embedded abrasive particles.

Protect skilled workers and avoid costly production breakdowns by installing Alcoa Abrasive Tread Plate in areas where slippery materials accumulate. For more information check the coupon below, write Aluminum Company of America, 1685-F Alcoa Building, Pittsburgh 19, Pa., or call your nearest Alcoa Distributor.

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For Exciting Drama Watch "Alcoa Theatre," Alternate Mondays, NBC-TV, and "Alcoa Presents," Every Tuesday, ABC-TV

Aluminum Company of America
1685-F Alcoa Building, Pittsburgh 19, Pa.

Show me how Alcoa Abrasive Tread Plate prevents slipping.
Please send a FREE sample—also application, design and fabricating data.

Name and Title_____

Address_____

City and State_____

Circle Item No. 48—Reader Service Card

For Distinguished Service

—From page 18

Burnside Steel Foundry Co., Chicago.

Burroughs Corp., two awards: Todd Co., Rochester, N. Y.; Treman Plant, Detroit, Mich.

Cabot Carbon Co., Pampa, Texas, Office.

Caltex East Co., Refining, New York, N. Y.

Campbell Soup Co., Camden, N. J.

Canadian Industries Ltd., seven awards: Ammunition Works, Brownsburg, P. Q., Can.; Beloeil Fertilizer Works, McMasterville, P. Q.; Central Research Lab, McMasterville, P. Q.; Chatham, Ont., Works; James Island, B. C., Works; Millhaven Wks., Textile Fib. Div., Kingston, Ont.; Paint Research Lab., Toronto, Ont.

Canada Paper Co., Windsor Mills, Que., Canada.

Cannon Mills Co., Kannapolis, N. C.

Carling Brewing Co., Inc., Brewing Malt Beverages, Frankenmuth, Mich.

Carrier Corp., three awards: Allied Products Div., Syracuse, N. Y.; Bryant Manufacturing Co., Indianapolis, Ind.; Spectrol Electronics Co., San Gabriel, Calif.

Castle & Cooke Inc., Kohala Sugar Co., Hawai, Hawaii.

Celanese Corp. of America, two awards: Charlotte, N. C.; Amcelle Plant, Cumberland, Md.

Celotex Corp., Asphalt Roofing Prod., Los Angeles.

Champion Paper & Fibre Co., Hamilton, Ohio.

Chicago Bridge & Iron Co., Salt Lake City, Utah.

Center Line Parts Plant, Service Parts & Accessories Supply Div., Chrysler Corp., Center Line, Mich.

City Utilities of Springfield, Mo.

James B. Clow & Sons, National Cast Iron Pipe Div., Birmingham, Ala.

Coats & Clark Inc., Tocca, Ga., Mills.

Congoleum Nairn Inc., Cedarhurst, Md.

Consolidated Mining & Smelting Co. of Can. Ltd., Blue Bell Mine, Riondel, B. C., Canada.

Consolidated Paper Corporation, Ltd., all manufacturing divisions, Que. Canada.

Continental-Diamond Fibre Corp., Newark, Del., Plant.

Corps of Engineers, Marine Construction, Washington, D. C.

Crane Limited, Montreal, Que., Canada.

Crucible Steel Co. of America, Midland, Pa.

Theo. H. Davies, two awards: Hamakaua Mill Co., Paauilo, Hawaii; Honokaa Sugar Co., Haina, Hamakua, Hawaii.

Decorated Metal Mfg. Co. Inc., Milltown, N. J.

Deere & Co., Tractor Works, Waterloo, Iowa.

Dominion Rubber Co. Ltd., Papineau Factory, Montreal, Que., Canada.

Duluth, Missabe & Iron Range Railway Co., Purchasing & Store Dept., Minn.

Du Pont Co. of Canada Ltd., Shawinigan, Que., Works.

E. I. du Pont de Nemours & Co., 31 awards: Antioch, Calif., Works; Barksdale, Wis., Works; Beaumont, Texas, Works; Belle Construction, Charleston, W. Va.; Belle, W. Va., Works; Carothers Research Lab, Henry Clay, Del.; Chestnut Run Const., Chestnut Run, Del.; Chicago, Ill., Plant; Cleveland, Ohio, Works; Columbia, Tenn., Plant; Dacron Res. Laboratory, Wilmington; E. Chgo., Inc., Orchem Plt.; E. Chicago, Ind., Works; Everett, Mass., Plant; Flint, Mich., Plant; Louviers, Colo., Works; Parlin, N. J., Plant; Perth Amboy, N. J., Plant; Petroleum Lab, Deep-

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This Speakman "Safety-Zone" unit is a first aid safety factor designed especially for use in refineries, laboratories, chemical plants and other installations where personnel are exposed to possible injury from chemical splash, clothes fire, caustics, acids, fumes, etc.

The Emergency Shower, which provides a heavy drenching shower, is complete with bottom sprays and is platform operated. Aerated Eye Wash Fixture operates independently of the shower, and is equipped with special hose and spray for administering relief to prone victims.

Emergency Showers and Aerated Eye Wash Fixtures are available separately in various sizes and models to meet your specific requirements. For complete details, write Dept. N-6 for Speakman Safety Booklet S-88-B.

SPEAKMAN COMPANY

WILMINGTON 99, DELAWARE

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water Pt., N. J.; Pioneering Lab, Henry Clay, Del.; Polychemicals Res. Lab, Henry Clay, Del.; Potomac River Works, W. Va.; Printing Plant, Philadelphia, Pa.; Sabine River, Const., Orange, Texas; Sabine River Works, Orange, Texas; Spruance Const., Richmond, Va.; Stine Lab, Newark, Del.; Tecumseh Construction, Del.; Victoria, Texas, Plant; Wilmington, Del., Shops; Wyandotte, Mich., Plant.

East Texas Steel Casting Co., Longview, Texas.

Eaton Manufacturing Co., Reliance Div. 2, Massillon, Ohio.

Electromode Div., Commercial Controls Corp., Rochester, N. Y.

Erie Malleable Iron Co., Erie, Pa.

Esterbrook Pen Co., Camden, N. J.

Farley & Loetscher Manufacturing Co., Dubuque, Iowa.

Federal Telecommunication Laboratories Inc., Nutley, N. J.

Fibreboard Paper Products Corp., Board Mill, Vernon, Calif.

Fieldcrest Mills Inc., two awards: Central Warehouse, Spray, N. C.; Towel Mill, Fieldale, Va.

Fischer Lime & Cement Co., Steel Fabrication Plant, Memphis, Tenn.

Ford Motor Co., four awards: Engineering Staff; Lorain Assembly Plant, Ford Division; Rolling Mills, Steel Div.; U. S. Area.

Genl Aniline & Film Corp., two awards: Ansco Div., Film & Paper, Binghamton, N. Y.; Dyestuff & Chemical Div., Rensselaer, N. Y.

General Dynamics Corp., Convair, San Diego, Calif.

General Electric Co., 12 awards: Chemical Processing Dept., H. A. P. O.; East Boston, Mass., Lamp Works; East Cleveland, Ohio, Lamp Works; Euclid Lamp Works, Cleveland, Ohio; Industry Control Dept., Roanoke, Va.; Lamp Wire 7 Phosp. Dept., Cleveland, Wire Plant; Locomotive & Car Equipment Dept., Erie Plant; Memphis, Tenn.; Meter Dept., Somersworth, N. H.; (Entire) New York, N. Y.; Vacuum Cleaner Dept., Cleveland, Ohio; Youngstown Lamp Works, Youngstown, Ohio.

General Foods Corp., Gaines Plant, Kankakee, Ill.

General Mills Inc., two awards: Chicago Cereal Plant; Mfg. Food Specialties, Keokuk, Iowa.

General Telephone Co. of Michigan, Muskegon.

General Telephone Co. of Upstate New York Inc., Johnstown.

General Time Corp., Westclox Div., Peru, Ill.

Gilbert Paper Co., Menasha, Wis.

James W. Glover Co., Ltd., Hilo, Hawaii.

B. F. Goodrich Co., Martha Mills, Thomaston, Ga.

—Turn page

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needless and costly, because people do not heed "Old Fashioned" Safety Posters!

is for *AK-SHUN

a totally new, refreshing technique, guaranteed to show tangible evidence of Communication!

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Through a new patented method, **AK-SHUN** continually changes itself, creating ACTION! DEPTH! COLOR!—the three essentials needed to Motivate and Stimulate response to your message.

People STOP, LOOK, and HEED your message when you use the completely new, totally different **AK-SHUN** Unit.

People heed your message with **AK-SHUN**, because **AK-SHUN** stimulates Action! For the first time ever, you can now have a Customized unit that lets you put your message wherever you want it, whenever you want to!

Write today for descriptive material about our exclusive, patented unit: **AK-SHUN.** We gladly offer you a 10 day FREE trial use of an **AK-SHUN** Unit in your plant and office, at No Obligation to you. Write to:

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(Style #200 illustrated)

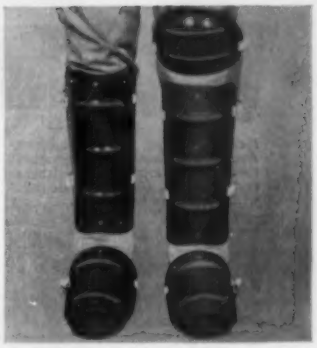
FOOT GUARDS consist essentially of a metal shield to be worn over the shoe whenever the foot is in danger of being either crushed or cut. The metal shield is designed to furnish a maximum amount of protection to the entire foot—not merely to the toes alone, but also to the instep—against hazards from falling, rolling or flying objects, or from accidental tool blows.

TOE GUARD →

fills a demand for toe protection in occupations where hazards injurious to toes exist. They fit any shoe, afford maximum toe protection, and like the foot guards do not encase the toe to the discomfort of the worker. (Style #700 illustrated.)

Fibre Instep & Leg Guards

These guards provide protection for the instep, shin and knee. Light weight, absolute freedom of leg motion, comfort and utmost protection are provided by the leg-contour shaped "Sankey" fibre guards. Guards are used when handling pulpwood, clearing brush, cane cutting, and numerous factory operations.



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225 SIXTH ST.—NSC ELLWOOD CITY, PA.

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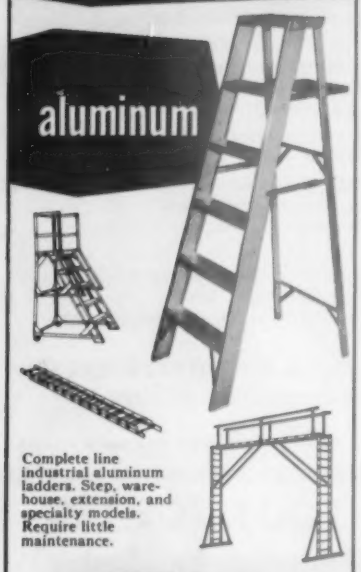
safe—dependable

Ladders for Industry

aluminum



Complete line industrial aluminum ladders. Step, warehouse, extension, and specialty models. Require little maintenance.

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1 to 12 step all-steel mobile Ladder-Stands. Move easily on retractable casters.

fiberglass

Non-conducting, non-absorbent. Available in straight and extension models. Ideal around high voltages and chemicals. Fiberglass side rails with aluminum rungs.

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W. Darlington St. Ext., Florence, South Carolina

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B. F. Goodrich Chemical Co., two awards: Louisville, Ky.; Riverside, N. J.

B. F. Goodrich Industrial Prod. Co., Industrial Products, Akron, Ohio.

Goodyear Tire & Rubber Co., two awards: Argentina, S. A.; Houston, Texas, Synthetic Rubber.

Gouverneur Talc Co. Inc., Gouverneur, N. Y.

Great Lakes Steel Corp., Great Lakes Steel Div., Ecorse, Mich.

Green Bay Box Co., Corrugated Div., Green Bay, Wis.

Greenwood Mills, Harris Plant, Greenwood, S. C.

H. M. Harper Company, Morton Grove, Ill.

Harshaw Chemical Co., Gloucester City, N. J.

Hawaiian Commercial & Sugar Co., Ltd., Puunene Maui, Hawaii.

H. J. Heinz Co., Chambersburg, Pa.

Hercules Powder Co., two awards: Brunswick, Ga., Camps; Harbor Beach, Mich.

Hershey Chocolate Corp., Hershey, Pa.

Hinde & Dauch Div., West Virginia Pulp & Paper Co., two awards: Hoboken, N. J.; St. Louis, Mo.

Homestake Gold Mining Co., Lead, S. D.

Hoover Co., No. Canton, Ohio.

Hughes Aircraft Co., El Segundo Div., Calif.

Hughes Tool Co., Houston, Texas.

Humble Pipe Line Co., Oil Pipe Line Dept., Houston, Texas.

Illinois Central Railroad, St. Louis Division.

Industrial Products Co., Philadelphia.

Inland Steel Co., East Chicago, Ind.

International Business Machine Corp., Plt. 1, Endicott, N. Y.

International Harvester Co., two awards: East Moline, Ill.; Milwaukee, Wis., Works.

International Paper Co., two awards: Louisiana Mill, Bastrop, La.; Mobile, Ala., Bag Factory.

Jahncke Service, General Office.

Jersey Central Power & Light Co., Asbury Park, N. J.

Joanna Western Mills Co., Joanna Cotton Mills Co., Div., Joanna, S. C.

Jones & Laughlin Steel Corp., two awards: Cleveland Container Div., Cleveland, Ohio; Supply Div., Tulsa, Okla.

Kaiser Aluminum & Chemical Corp., four awards: Baton Rouge Works, La.; Permanente, Calif.; Permanente Shops, Calif.; Spokane, Wash.

Kaiser Metal Products Inc., Bristol, Pa.

Kennecott Copper Corp., two awards: Chino Mines Div., Hurley, N. M.; Utah Copper Div., Magna Plt., Garfield, Utah.

Kentucky Utilities Co., Old Dominion Power Co., Lexington, Ky.

Kimberly Clark Corp., three awards: Neenah Mill, Neenah, Wis.; Research and Development Div., Neenah, Wis.; Staff Eng. Dept., Neenah, Wis.

Kansas Gas and Electric Co., Electric Public Utility, Wichita, Kan.

Kellogg Co., Battle Creek, Mich.

Lennox Industries Inc., Columbus, Ohio.

Lever Brothers Co., Lever House, New York.

Libbey Owens Ford Glass Co., Plant 1, Charleston, W. Va.

Liberty Powder Defense Corp., Wabash River Ord. Wks., Newport, Ind.

Little Narrows Gypsum Co. Ltd., Little Narrows, Vict. Co., Nova Scotia.

Lockheed Air Terminal Inc., Burbank, Calif.

Loft Candy Factory, New York.

Management Services Inc., Oak Ridge, Tenn.

Marathon, A Division of American Can Co., Menasha Canal Plt., Menasha, Wis.

Maryland Glass Corp., Baltimore Md.

Material Service Corp., two awards: Lockport, Ill., Machine Shop; Thornton Quarry, Thornton, Ill.

Maytag Co. Plant 1, Newton, Iowa.

McQuay Norris Manufacturing Co., St. Louis, Mo.

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FLASHER BARRICADE
High Visibility 7 inch Flashers
One and Two Light Models
Retractable Legs

MORE USEFUL BATTERY LIFE
WITH EXCLUSIVE
ADJUSTA—FLASHRATE control
SAFE—DEPENDABLE—LOW COST

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The Invisible Protective glove that goes on BEFORE WORK... Washes off INSTANTLY AFTER WORK... taking ALL DIRT with it. Leaves hands and face clean!

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Mengel Co., Corrugated Boxes, Fulton, N. Y.

Merck & Company Ltd., Valleyfield, Que., Canada.

C. R. Meyer & Sons Co., General Construction, Oshkosh, Wis.

Minerals & Chemicals Corp., Edgar Div., McIntyre, Ga.

Monsanto Chemical Co., five awards: The Barton Plant, Luling, La.; Lion Oil Production & Exploration, El Dorado, Ark.; Lion Oil Co., Refining, El Dorado, Ark.; Monsanto, Tenn.; Merrimac Div., Everett, Mass.

Moore Business Forms Inc., Mfg. of Printed Forms, Niagara Falls, N. Y.

Munising Paper Company, Munising, Mich.

National Carbon Co., Div. of U. C. C., Republic Plt., Niagara Falls, N. Y.

National Distillers Products Corp., three awards: Blending & Spirits, Ohio; Old Crow Dist., Frankfort, Ky.; Old Grand Dad, Frankfort, Ky.

National Gypsum Co., two awards: Fort Dodge, Iowa; Mobile, Ala.

National Lead Co., Inc., Monticello, Utah, Plant.

New York Trap Rock Corp., Clinton Point Plant, New Hamburg, N. Y.

Nibco Inc., Nibco of Texas Div., Nacogdoches, Texas.

North American Cement Corp., Security Plant, Hagerstown, Md.

North American Cyanamid Co., Welland Plant, Niagara Falls, Ont., Canada.

North Central Airlines Inc., Minne-

DISPLAY of National Safety Council first place award for electric utilities, by the St. Joseph Light & Power Company, St. Joseph, Mo. The company completed the year 1958 without a disabling injury, and since then has gone well over the million man-hour mark.

Shield them with economical barriers of J-M ALUMINIZED Asbestos Cloth

Radiant heat is a major cause of discomfort and fatigue that reduces efficiency and causes accidents. Economical new J-M *Aluminized* Asbestos Cloth reflects 90% of all radiant heat . . . helps maintain high production and good safety practices.

This new J-M material is a rigidly tested combination of aluminum and Asbestos. It retains a great degree of strength at temperatures up to 1400°F —over long periods of time—and can be used for curtains, shields, blankets, hoods and covers to protect workers from flame as well as radiant heat.

For further data, write Johns-Manville, Box 14, New York 16, N. Y. Ask for Brochure TX-2A.

PORTABLE SHIELDS for emergency jobs near heat or flame can also be made with this J-M *Aluminized* Asbestos Cloth.

JM PRODUCT JOHNS-MANVILLE

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INSULATED SAFETY LINKS

In the past two years 22 lives were lost in California in accidents that could have been prevented with this new device. On cranes it protects hook tenders if the boom contacts high voltages. On hoists it separates weldment from hoisting mechanisms. Won't impair lifting capacity . . . links are rated at the same load as hooks. Links available in all sizes from ½ to 30 tons (4 to 1 safety factor) and dielectric strength from 1 - 100 K V (2 to 1 safety factor).

Write for data sheet

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apolis, Minn.

Northern Malleable Iron Co., St. Paul, Minn.

Norton Co., Abrasives Refractories, Worcester, Mass.

Ohio Boxboard Co., Rittman, Ohio.

Ohio Power Co., Canton, Ohio.

Ohio Valley Electric Corp., Chillicothe, Ohio.

Old Farmers Distillery, Athertonville, Ky.

Ontario Hydro, Eastern Region, Ottawa, Canada.

Oswego Falls Corp., Fulton, N. Y.

Pacific Gas & Electric Co., San Francisco.

Perfect Circle Co., Tipton, Ind.

Chas. Pfizer & Co. Inc., two awards: Brooklyn Plant; Groton, Conn.

Pickands Mather & Co., Mauthe Min. Co., Newport Mine, Ironwood, Mich.

Powell River Co. Ltd., Powell River, B. C., Canada.

The Pullman Co., Richmond District.

Procter & Gamble Co., seven awards: Baltimore, Md., Plant; Ivorydale, Ohio; Ivorydale, Ohio, General Plant; Ivorydale, Ohio, Process Plant; Macon, Ga., Plant; Port Ivory Food Prod, Plt., Staten Island, N. Y.; Quincy, Mass., Plant.

Quaker Oats Co., Cedar Rapids, Iowa.

Quebec Iron & Titanium Corp., Havre St., Pierre, Que., Canada.

Ralston Purina Co., three awards: Charlotte, N. C.; Feed Mfg., Nashville, Tenn.; Feed Mfg., St. Johnsbury, Vt.

RCA Victor Company, Ltd., Prescott, Ont., Canada.

Remington Arms Co. Inc., two awards: Misc. Field Sales Group, Bridgeport, Conn.; Park Forest, Ill.

Remington Rand, two awards: Shreveport, La., Plant; Univac, Sperry Rand Inc., South Norwalk, Conn.

Republic Steel Corp., 10 awards: Buffalo, N. Y.; Ideal Foundry Div., Newton Falls, Ohio; Massillon, Ohio; Niles Plant, Warren, Ohio; Pressed Steel Div., Niles, Ohio; Steel & Tubes Div., Detroit, Mich.; Steel & Tubes Div., Elyria, Ohio; Union Drawn Steel Div., Gary, Ind.; Union Drawn Steel Div., Massillon, Ohio; Warren, Ohio.

Rockford Drop Forge Co., Rockford, Ill.

Rohr Aircraft Corp., Chula Vista, Calif.

Ryan Aeronautical Co., San Diego.

St. Marys Kraft & Kraft Bag Corp., two awards: both to St. Marys, Ga.

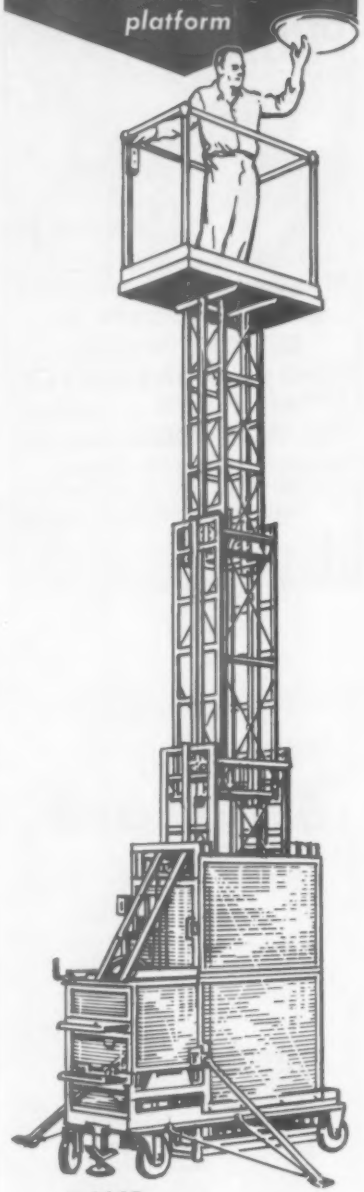
St. Regis Paper Co., Bucksport, Maine.

St. Regis Paper Company Canada Ltd., Vancouver, B. C., Canada.

Schick Inc., Lancaster, Pa.

Schlage Lock Co., San Francisco.

Complete Safety
with a
HI-REACH TELESCOPER
Fast work with all tools and materials on the platform



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Quickly and Easily Installed by Anyone—No Tools Needed!

- Simply slip GETS-A-LITE GUARD AND GUIDE over the fixture, as illustrated.
- Made of indestructible spring steel wire. Nothing to break, get out of order or replace. Will last indefinitely.
- Once installed, GETS-A-LITE GUARD AND GUIDE is NEVER removed.
- Nothing to unlock, fuss with or lock, when changing lamps.
- GETS-A-LITE GUARD AND GUIDE actually steers lamp into socket, enabling maintenance man to change lamp in 10 seconds!
- Available for 40 watt and 100 watt fluorescent lamps.

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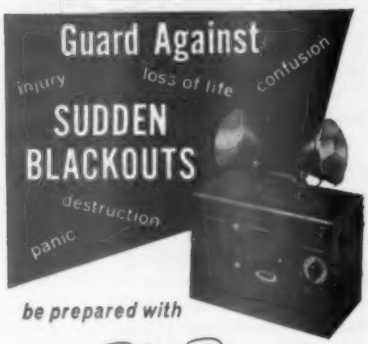

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Storage Battery Always Fully Charged—Built-in Charger

Just plug in a BIG BEAM Emergency Light and rest assured that when regular lights fail, your plant or building will be protected automatically with hours of bright, SAFE illumination. Variety of models available.

HAND LAMPS • FLARES

Wide range of hand lamps and flares also available, including Explosion-Proof Hand Lantern, Model 287EX for use in Hazardous Locations, Class 1, Group D, Approved by Underwriters' Laboratories.

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Schmidt & Ault Paper Co., York, Pa.

Sciaky Brothers, Chicago.

Scovill Manufacturing Co., Waterbury, Conn., Division.

Shell Pipe Line Corp., Hobbs, N. M., Division.

Sinclair Refining Co., two awards: Manufacturing Dept., New York City; Sinclair Refining Co., Wood River Refinery.

Singer Mfg. Co., E. Port Plant, Elizabeth, N. J.

Ralph L. Smith Lumber Co., Anderson, Calif.

Southern Railway System, Pinners Point Agency, Washington, D. C.

Sperry Rand Corp., two awards: Belleville, Pa.; Ford Instrument Co., Long Island City, N. Y.

Standard Lime & Cement Co., Lime Quarry, Millville, W. Va.

Standard Register Co., Atlantic Div., York, Pa.

Stauffer Chemical Co., Chauncey, N. Y.

Stearns Roger Mfg. Co., Denver, Colo.

Sylvania Electric Products Corp., Mech. Develop., Salem, Mass.

Sylvania Electronic Tubes Equip. Development Plant, Emporium, Pa.

Sylvania Lighting Products, Ipswich, Mass., plant.

Synthane Corp., Oaks, Pa.

Talon Inc., Stanley, N. C.

Tecumseh, Mich., Products Co.

Tennessee Dept. of Highways & Public Works, Nashville, Tenn.

Tennessee Eastman Co., three awards: Bays Mountain Construction Co., Kingsport, Tenn.; Industrial Relations Div.; Power and Services Div.

Tennessee Valley Authority, Wilson Dam, Ala.

Texas Eastman Company, Division Eastman Kodak Company, Longview, Texas.

Texas Electric Service Co., Fort Worth, Texas.

Thiokol Chemical Corp., Longhorn Div., Marshall, Texas.

Toronto Paperboard Co., Toronto, Ohio.

Uhl Hall & Rich, Massena Field Office, Massena, N. Y.

Union Carbide Chemicals Co., three awards: Design & Constr., Charleston, W. Va.; Hastings, W. Va.; Texas City, Texas.

Union Carbide Corp., five awards: Clarksburg, W. Va.; National Carbon Co., Bennington, Vt.; National Plant, Niagara Falls, N. Y.; Silicones Div., Long Beach Plt., Sisterville, W. Va.; Union Carbide Metals, Niagara Falls, N. Y.

Union Carbide Nuclear Co., two awards: Oak Ridge, Tenn., Gaseous

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U. S. Steel Corp., five awards: American Bridge Co., Gary, Ind.; Fairfield Steel Works, Tennessee Coal & Iron Div.; Oliver Iron Mng. Div., E. Dist. Shops, Ely & Virginia, Minn.; Oliver Iron Mining Div., Sherman Mine, Fraser, Minn.; Tennessee Coal & Iron Div., Hamilton Coal Mine.

Veterans Administration Hospital, Canandaigua, N. Y.

Visking Co., Division of U. C. C., Home Office Div., Chicago.

Vitreous Steel Products Co., Nappanee, Ind.

J. Weingarten Inc., Gulf Coast, Texas and Louisiana, Houston, Texas.

Welding & Manufacturing Co., New Orleans, La.

Western Electric Co. Inc., 12 awards: Atlanta, Ga., Distributing House; Boston, Mass., Distributing House; Burlington, N. C., Shops; Columbus, Ohio, Plant; Distributing House, Portland, Ore.; Kansas City, Mo., Distributing House; Kearny, N. J., Works; Jacksonville, Fla., Distributing House; Nashville, Tenn., Distributing House; New Haven, Conn., Distributing House; Queensboro Shops, Middle Village, N. Y.; Seattle, Wash., Distributing House.

Westinghouse Air Brake Co., Wilmerding, Pa.

Westinghouse Electric Corp., three awards: Air Conditioning, Staunton, Va.; Atomic Power Div., Pittsburgh, Pa.; Transformer Div., Sharon, Pa.

Weyerhaeuser Timber Co., two awards: Sawmill, Coos Bay, Ore.; Tacoma, Wash., Office.

Wood Conversion Co., Cloquet, Minn.

Young Spring & Wire Corp., Automotive Trim Div., Ajax, Ont., Canada.

Wire from Washington

—*From page 16*

trolled areas, and for all persons less than 18 years old, the maximum permissible radiation doses and concentrations in air and water would be one-tenth of the recommended permissible values of radiation workers (See "Wire," April 1958). (The International Commission on Radiological Protection would set the limits for the general population at no higher than one-thirtieth the maximum dose permissible for atomic workers.)

In inviting comments on the proposed amendment of its regulations, AEC said: "Based upon present knowledge and experience it is believed that the levels established provide a high standard of safety for exposed individuals; and that exposure to radiation at levels permitted under the regulation . . . is not likely to cause appreciable bodily injury," although the AEC noted the possibility of individual variations.

AEC also proposed to revise its indemnity regulations under which financial protection is given to the public, licensees, and their suppliers against damages from accidents involving nuclear reactors licensed by the AEC (See "Wire," October 1957 and 1958).

One of the changes will be to add to the present formula for computing the amount of required protection a factor which takes into account the population density of the area surrounding the reactor.

The Joint Congressional Committee on Atomic Energy concluded its hearings on the Indemnity Act and the Advisory Committee on Reactor Safeguards. H.R. 6265 (Roberts) would transfer from AEC to the U. S. Public Health Service primary responsibility for the protection of the public from radiation hazards.

The International Labor Conference will consider in June the protection of workers against radiation. In response to an ILO questionnaire, 52 of the organization's 80 member countries declared themselves in favor of adoption of international standards indicating the precautions essential to safeguard workers against radiation hazards.

Highway Safety. The Senate passed S. 441, to extend and expand the federal air pollution control program (See "Wire," March 1959). As amended in the Senate, the bill authorizes a 4-year program with $7½ million annually.

Sen. Engle, one of the bill's sponsors, called the automobile "the nub of the problem" and the "largest single source of air contamination." He chided the auto industry for spending less than $1,000,000 a year "to protect the public health and welfare from the growing menace of automotive exhausts," but complimented the industry's changed attitude since the National Air Pollution Conference (See "Wire," January 1959).

The senator said: "I believe it is the responsibility of the automobile industry and gasoline refiners to accept major responsibility for solving the problems created by their products. And it is the responsibility of government to see that their industries do in fact meet this challenge."

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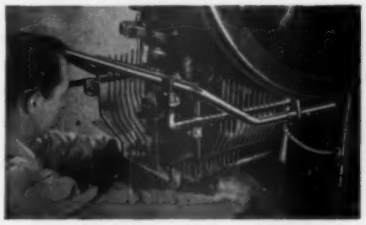

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ernments could do the job alone, he expressed the view: "It may be that positive federal restriction ultimately would be required with respect to vehicles transported in interstate commerce."

Under the broadened authority of S. 441, as passed in the Senate, the surgeon general of the Public Health Service could promulgate national standards on exhaust emission and recommend regulations to the states to prevent the occurrence of public health nuisances.

In a motor carrier accident investigation, the ICC called attention to numerous reports of deaths of truck drivers due to carbon monoxide poisoning, especially where such drivers were sleeping in their vehicle cabs with the engine running. The ICC suggested that such dangerous practices be discouraged.

Aviation Safety. The deputy administrator of the Federal Aviation Agency outlined his agency's safety program. "The number one major problem . . . is how to reduce the probability of near mid-air collisions to an absolute minimum."

He stressed vigilance. The concept of "see and be seen" is definitely not obsolete. He demanded flight crew members remain at their stations with seat belts fastened during flight, and said investigation of some near-misses indicated that they occurred while the captain was in the cabin talking to the passengers. This view was enforced by FAA's amendment of its Air Traffic Rules to include a mandatory provision to the effect noted, "in the interest of safety."

Other FAA safety developments noted include: special safety requirements for turbo-jets and jets; special emphasis and reliance on aircraft simulator training; en route inspection of scheduled flights; tightening up on standards governing commercial flight training schools, flight instructors, and private pilots; establishment of a maintenance review board; and establishment of a system of approved repair stations for general aviation.

The chairman of the Civil Aeronautics Board ascribed much of aviation's safety problems to shortsighted economies in connection with traffic control hazards. The House Appropriations Committee

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curtailed an appropriation request for funds to operate FAA's long-range radar facilities.

The committee also criticized CAB's delegation of some accident investigation functions to FAA (See "Wire," February 1959) on the ground that it was the intent of Congress for CAB, not the FAA, to investigate all aircraft accidents.

Marine Safety. Pursuant to Congressional joint resolution, the President proclaimed the week which includes July 4th as *National Safe Boating Week*. He called on all boat operators, boating organizations, the boating industry, state and federal agencies, and all other groups interested in boating to exert greater effort during the week and throughout the boating season to keep boating safe and pleasant.

He also invited the governors to provide for the week's observance "to encourage nationwide interest in safe boating practices."

An administration proposal, S. 1712 (Magnuson) and H.R. 6496 (Bonner), would extend the Motorboat Act of 1940 to Puerto Rico and the Virgin Islands, as was the case prior to the Federal Boating Act of 1958.

The Coast Guard issued interpretative rulings on certain aspects of its "Rules of the Road"—requirements governing all vessels while on navigable waters of the United States, as well as all vessels owned by the United States while on the high seas. A Rules of the Road Subcommittee of the Coast Guard Merchant Marine Council has also been established.

The Maritime Administration of the Department of Commerce commissioned a private study of collisions at sea to develop the causal relationships between human failure and assigned causes of marine accidents. It is also hoped to evaluate ship equipment with a bearing on navigation problems.

The U. S. Department of Labor prepared drafts of regulations to implement the recently enacted law dealing with safety standards for the longshore and ship-repair industry (See "Wire," September 1958). The draft on the ship-repair industry, circulated for comment, is based largely on voluntary codes drafted by the Bureau of Labor

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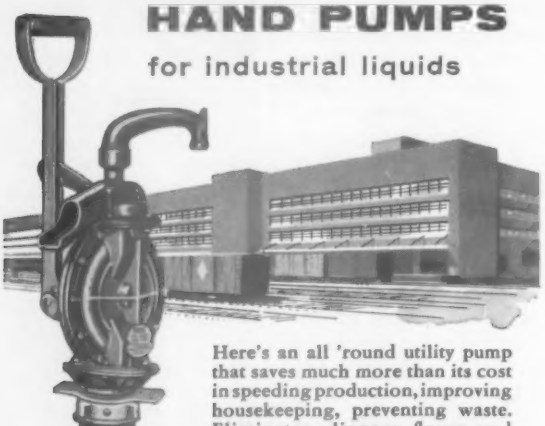

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Circle Item No. 71—Reader Service Card

Standards several years ago. In carrying out the law the department plans to establish four or five regional offices.

Home Safety. The Food and Drug Administration issued notice of a proposed rule-making procedure under the recently enacted food additives law (See "Wire," September 1958). The purpose would be to add a lengthy listing of substances "that are generally recognized as safe" to the exemptions from tolerance requirements.

H.R. 6349 (Broyhill) would amend the act relating to safety latches on household refrigerators (See "Wire," July and September 1956) by requiring a device enabling users or shippers to ventilate the refrigerator or home freezer when not in use, through removal of the door or other means, such device to conform with standards published by the Secretary of Commerce.

School Safety. An Educational Conference on Occupational Safety was held under the auspices of the U. S. Office of Education to implement recommendations of the President's Conference on Occupational Safety.

Effort was made to locate responsibility for effectuating existing recommendations and determining priorities. The group proposed establishment of a national steering committee, under Office of Education sponsorship to see that action is carried out.

Under the auspices of the American Institute of Architects, a national conference is planned for September to prepare basic principles for local school authorities concerned with school fire safety. H.R. 6758 (Auchincloss) seeks to strengthen fire prevention safety laws applicable to schools in the District of Columbia.

Farm Safety. The President proclaimed the week beginning July 19 at *National Farm Safety Week*, and called on farm families and persons allied with agriculture "to join their efforts in a continuing campaign to prevent accidents." He requested support and participation from "all persons and organizations concerned for the welfare of farm people."

Working in the Shadows

—From page 45

per cent of automobile drivers think they are good drivers. Another survey, sponsored in part by one of the oil companies, revealed that motorists have a low opinion of present day techniques, methods and approaches in safety education.

We accuse everybody of apathy and indifference! Is it possible that this shoe might fit some in the safety profession?

Lord Beaverbrook has said, "Great affairs require a careful avoidance of that rigidity of standpoint that stamps the doctrinaire or the mule." It could be that many of our slogans, cliches and techniques are obsolete.

I don't know what might be devised by intelligent and imaginative effort on your part. Hundreds of thousands of dollars are going into research to study man's behavior and what makes him do what he does.

Your safety researchers may find that an entirely new approach is needed. Maybe it will be brainwashing to be started in childhood. I don't know if people will do less crippling and killing of themselves if they are frightened, put in jail, inspired, or educated. I do know that you are challenged to find the answer.

* * *

The second term, *Intemperance*, relates generally to the affections, and more specifically to moral practices.

My observations are that there must be an affection, a dedication, a moral compulsion, on the part of the safety profession, if it is to do that which is expected of it.

Imparting knowledge is not enough! The challenge extends to the point that you must stir men's hearts and emotions so they will be motivated to practice protection and surrender to safety.

But, once again, the work is done in the shadows. The moral zeal, enthusiasm and affection must be tempered by recognition of the overall objective of the business enterprise.

The common ingredient I have noticed in industrial safety engineers who are getting results is a dedi-

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cation to purpose. Neither physical hardship, personal disappointments or disregard of their advice seems to deter them from their path that hopefully leads to conserving of life or property.

But the dedicated safety engineer can let his moral zeal push him to the point where temporary failure makes him resentful and encourages him to self pity. If this happens, he will rob both his company and his cause.

The boss will not become imbued with your affection for safety if you become intemperate in applying your convictions. The dedicated safety man is content to be moderate and is willing to ride out the storms. He will remember that safety is not an end in itself; it is a means to more efficient and economic operation.

He will do his work in the shadows without demand for the spotlight. His affections and his spirit of dedication to a cause will make him strong and steadfast.

* * *

Impatience is the factor included among those ideas derived from the exercise of volition. It is a result of our voluntary and active powers.

I would like you to think of its opposite as action—but action with a firm purpose and at the right time. I have in mind the action needed to implement ideas originated out of intellectual pursuit and tempered by moral persuasion.

Sometimes it is easy to say that our program is being held back by higher authority, when the fact is there has been no action on our part to demonstrate its potential worth.

No plan, no matter how good, will work itself; and you know the proverb about good intentions. I am impressed with Dwight Morrow's observation on this point. He said, "We judge ourselves by our motives, but we judge others by their actions."

Those who must be sold on the safety program your intellect can devise will not be convinced solely on the strength of your motive. Be not impatient—but act!

Perhaps there is some safety engineer, intolerant of those foremen and employees who will not follow the basic rules of safety or

who will not cooperate in the safety program. Next time try getting the job done by practicing good human relations.

We all know that no one is sufficient unto himself; we all need the help of our fellow man. And the other fellow may not think your idea is so good. It is then that the safety man must pursue his intellectually designed and affectionately tempered program with patient, persistent action.

Moreover, he needs to remember that all problems are not always solved—sometimes we can only whittle them down to a size where we can tolerate them.

If you believe, as I think you do and as I do, that the safety profession can meet today's challenge only by changing people's attitudes, then I'm sure you agree that a vision is not enough. It has been said that vision without action is weakness. Consequently, it is essential for you to act out those plans you make and believe in.

It is true, I think, that the driving energies for social behavior, including safe practices, come from within the individual, but it is your action which must motivate him to mobilize and focus this energy on specfic goals of safety at work and at play.

Fiber Rope

—*From page 25*

Manila, Sisal Ropes

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Sisals are not generally as satisfactory as Manila for most uses because sisal breaking strengths are from 20 to 35 per cent lower than the breaking strengths of Manila. Comparing the strengths of various fibers, that of Manila is taken as 100, sisal 80, henequen 65, and hemp 100.

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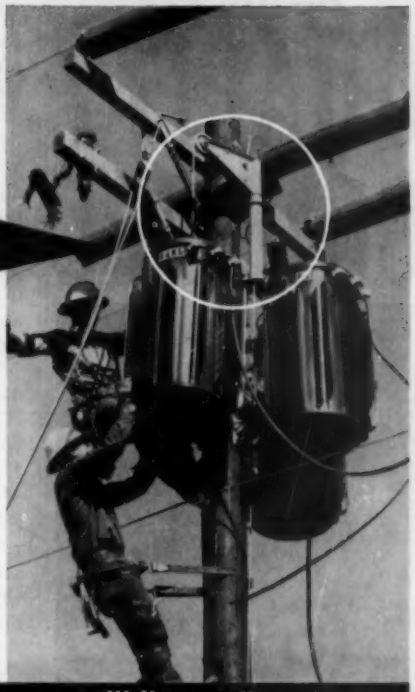

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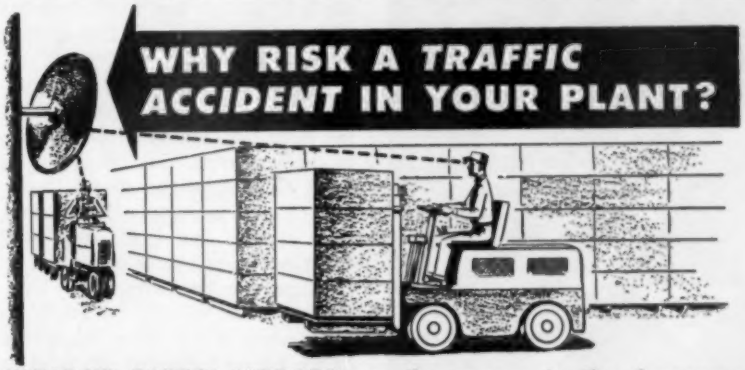

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cation to purpose. Neither physical hardship, personal disappointments or disregard of their advice seems to deter them from their path that hopefully leads to conserving of life or property.

But the dedicated safety engineer can let his moral zeal push him to the point where temporary failure makes him resentful and encourages him to self pity. If this happens, he will rob both his company and his cause.

The boss will not become imbued with your affection for safety if you become intemperate in applying your convictions. The dedicated safety man is content to be moderate and is willing to ride out the storms. He will remember that safety is not an end in itself; it is a means to more efficient and economic operation.

He will do his work in the shadows without demand for the spotlight. His affections and his spirit of dedication to a cause will make him strong and steadfast.

* * *

Impatience is the factor included among those ideas derived from the exercise of volition. It is a result of our voluntary and active powers.

I would like you to think of its opposite as action—but action with a firm purpose and at the right time. I have in mind the action needed to implement ideas originated out of intellectual pursuit and tempered by moral persuasion.

Sometimes it is easy to say that our program is being held back by higher authority, when the fact is there has been no action on our part to demonstrate its potential worth.

No plan, no matter how good, will work itself; and you know the proverb about good intentions. I am impressed with Dwight Morrow's observation on this point. He said, "We judge ourselves by our motives, but we judge others by their actions."

Those who must be sold on the safety program your intellect can devise will not be convinced solely on the strength of your motive. Be not impatient—but act!

Perhaps there is some safety engineer, intolerant of those foremen and employees who will not follow the basic rules of safety or

who will not cooperate in the safety program. Next time try getting the job done by practicing good human relations.

We all know that no one is sufficient unto himself; we all need the help of our fellow man. And the other fellow may not think your idea is so good. It is then that the safety man must pursue his intellectually designed and affectionately tempered program with patient, persistent action.

Moreover, he needs to remember that all problems are not always solved—sometimes we can only whittle them down to a size where we can tolerate them.

If you believe, as I think you do and as I do, that the safety profession can meet today's challenge only by changing people's attitudes, then I'm sure you agree that a vision is not enough. It has been said that vision without action is weakness. Consequently, it is essential for you to act out those plans you make and believe in.

It is true, I think, that the driving energies for social behavior, including safe practices, come from within the individual, but it is your action which must motivate him to mobilize and focus this energy on specfic goals of safety at work and at play.

Fiber Rope

—*From page 25*

Manila, Sisal Ropes

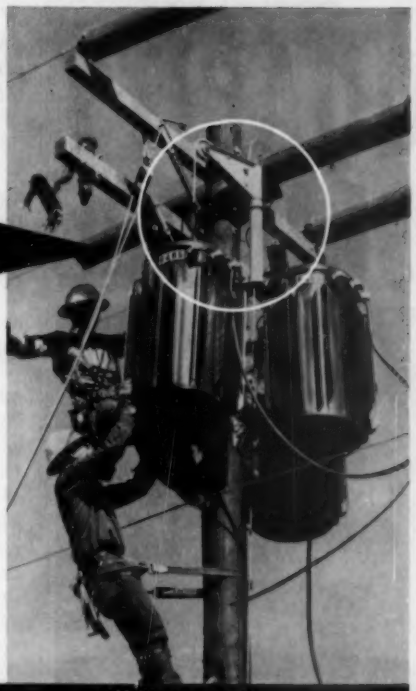
Properties of Manila make it the best-suited natural fiber for cordage, chiefly for large ropes. Sisal fibers seem to find their main popularity in small sizes.

Sisals are not generally as satisfactory as Manila for most uses because sisal breaking strengths are from 20 to 35 per cent lower than the breaking strengths of Manila. Comparing the strengths of various fibers, that of Manila is taken as 100, sisal 80, henequen 65, and hemp 100.

There is often a variation in quality in one family of fibers. Manila, for instance, is available

Circle Item No. 76—Reader Service Card

Cut costs... Provide greater safety with a MO PE CO Transformer Hoist



- One position base mounting
- Swivel head permits multiple mounting
- Lightweight 2 piece portable unit (42 lbs.)
- Assembles easily at top of pole
- Tested at 3000 lbs. lift on cable
- Uses steel cable or manila rope

Save time with the MoPeCo hoist. You can install 3 transformers in only 30 minutes!

Order through your favorite distributor

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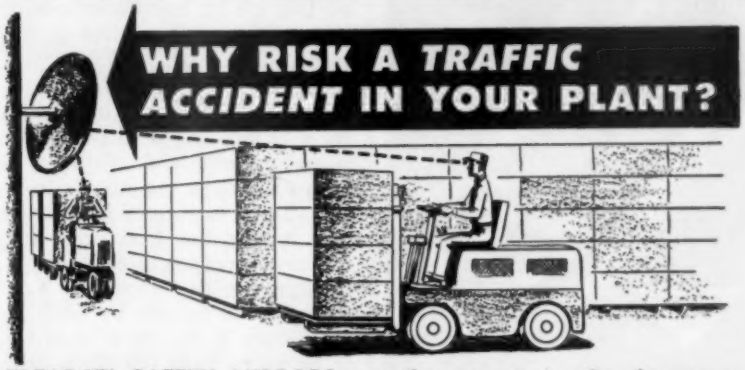
MORRISON-PELSUE CO.
Denver, Colorado
2256 So. Delaware St. RAce 2-2834

WHY RISK A *TRAFFIC ACCIDENT* IN YOUR PLANT?



KLEAR-VU SAFETY MIRRORS are the answer to the dangerous blind corner problem in your plant or warehouse. They are also adaptable for outdoor use in your parking lot, loading dock area or other points where traffic converges.

Mounted at cross aisle intersections, entrances and exits at a height of 8 to 10 feet, Klear-Vu Safety Mirrors clearly reflect oncoming intersection traffic to both power truck operators and pedestrians.

Style	No.	Dimensions
Circular Convex Glass	120	12" dia.
Circular Convex Glass	180	18" dia.
Circular Convex Glass	240	24" dia.
Circular Convex Glass	300M.R.	30" dia.
Circular Convex Glass	360M.R.	36" dia.
Flat Glass Rectangular	918	9"x18"
Flat Glass Rectangular	1640	16"x24"

M.R. indicates metal rim.

Available in either convex or flat glass styles, the mirrors are easily installed and quickly adjustable to any desired angle.

Special sizes made to order. Polished flat metal mirrors available.

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Write for Bulletin.

Circle Item No. 77—Reader Service Card

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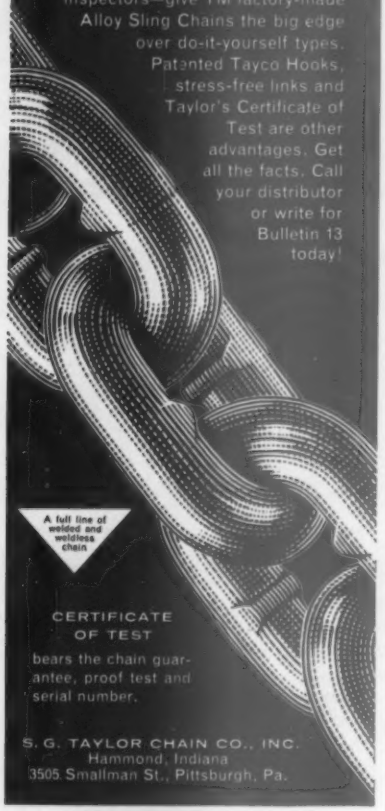
QUALITY CONTROL

another advantage of
factory-made
alloy sling chains!

Taylor's well-known quality control —gamma ray testing . . . controlled heat-treating . . . professional inspectors—give TM factory-made Alloy Sling Chains the big edge over do-it-yourself types. Patented Tayco Hooks, stress-free links and Taylor's Certificate of Test are other advantages. Get all the facts. Call your distributor or write for Bulletin 13 today!



A full line of welded and weldless chain

CERTIFICATE OF TEST
bears the chain guarantee, proof test and serial number.

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Hammond, Indiana
3505 Smallman St., Pittsburgh, Pa.

Taylor Made CHAIN SINCE 1873

Circle Item No. 78—Reader Service Card

in 21 grades. But with cordage products, as with tobacco, blending often produces ropes with desired qualities.

High-grade Manila rope, when new, is firm but pliant, ivory to light yellow in color, and has considerable luster. When drawn through the hand, it has a smooth feel. Sisal rope varies in color from white to yellowish white and lacks the gloss of high-grade Manila. Sisal fibers are stiff and harsh and tend to splinter.

Manila rope often is recommended for hoisting because of its ability to render or pay out evenly when used around capstans or bits. Derived from a species of plantain of the same family as the banana, Manila has a cellulose base. As a result, this fiber can be affected seriously by bacterial growths as well as by water, acid, strong alkali, heat . . . and abuse!

Inspection

Rope may be right lay, left lay, or cable lay. Hold up a piece of rope. If strands run up to the right, it's right lay. If strands run up to the left, it's left lay. Cable consists of three right-lay ropes laid up left-handed.

Adding or removal of twists destroys a rope's balance, often causing it to fail. Increased twist tends to make a rope kink. Removal of turns may make the strands back-turn. This can happen if the rope spins with a free load or is used constantly over blocks or a capstan. Damage can be permanent. Keep your rope in balance by adding a twist when it has been taken out or by taking twist out when extra has been added.

Inspect new rope along its entire surface before putting it into service. Then examine it at least every 30 days ordinarily, or oftener if it supports scaffolding on which men work. If it is exposed to acids or caustics, inspect the rope daily. On its outside surface look for:

1. Abrasion—broken fibers.
2. Cuts.
3. Soft spots or general softness. These indicate badly worn rope.
4. Decay or burns by hot substances—paraffin, solder, chemicals.
5. Cutting in or drawing down of one yarn or strand.

Circle Item No. 79—Reader Service Card

FREE SAMPLE
to prove
Pulmosan
AIRCOOL
SWEAT BANDS
ARE BEST

Cooler, longer-lasting reinforced perforated foam rubber sweat bands from Pulmosan have elastic headbands with four-slot slide adjustment to fit all head sizes.

For free sample, write:
Pulmosan
SAFETY EQUIPMENT CORP.
644 Pacific Street
Brooklyn 17, N. Y.

PULMOSAN STOPS Accidents

6. Variation in size, roundness of strands.

Inspect inner fibers. Untwist the rope in several places to see if inner yarns are bright, clear, and unspotted. Check for:

1. Broken fibers or yarns.
2. Powdering in center of rope at strand axis—a sign of serious strain from grit.
3. Dry rot or mildew.
4. Change in color of fiber, yarn, strand.

If in doubt about the condition of rope after visual inspection, open a strand of yarn and take out several lengths of fiber. Break the fiber across a thumbnail; do the same with a fiber from new rope. If the fiber from the used rope breaks easily, has little luster or stretch, and feels brittle and dry, discard the rope.

Maintenance

To uncoil rope properly, lay the coil flat on the floor with the inside end at the bottom. Reach down

Circle Item No. 80—Reader Service Card

THROW-AWAY
GOGGLE CLEANING AND
ANTI-FOGGING STATION

Pulmosan

When solution and tissues are exhausted, throw it away! No refills, no maintenance. Cleans and anti-fogs in one simple operation!

PULMOSAN STOPS Accidents

Pulmosan
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and pull the inside end up through the coil. Uncoil regular right-lay rope in a counter-clockwise direction. Don't disregard a manufacturer's instructions for opening and uncoiling a rope. Damage can be permanent.

Clean rope before storing. Wash it with a moderate hose stream. Shake out the remaining dirt when the rope dries. (Surface and imbedded dirt can act as harmful abrasives on strands and fibers.) A dry, unheated room, with free air circulation, is best for a storage area. Ideal temperature is 70 F at 65 per cent relative humidity. Keep loose coils off the floor, preferably hung on a wooden peg.

Never store rope wet. It's almost certain to mildew. Alternate wetting and drying causes more rapid deterioration than constant wetness. Never leave a wet rope where it can freeze. Also, don't let rope touch radiators, steam pipes, or other things which could dry out the oil in rope fibers.

Don't store rope where it is exposed to acids, acid fumes, or alkalies. Linseed drying oil, storage battery solution, washing compound, and paint are also injurious. Exposure to acids and caustics causes quick deterioration, usually showing in black or brown spots.

Avoid kinking rope. When rope is repeatedly twisted in one direction, kinks develop unless twist in the opposite direction is frequently thrown in or out. Pulling kinks through restricted space, such as a tackle block, will seriously harm rope.

Don't drag rope on the ground or against rough or sharp objects. If an object has sharp corners, pads of burlap or bagging may be in order. When outer fibers are worn by chafing or dragging over rough, gritty, or splintered surfaces, rope weakens and wears. Where rope must rub over such objects as cleats or winchheads, make sure they are smooth.

Avoid sharp angles or bends. While fiber is somewhat elastic and a sling or lashing will hug an object, sharp corners and angular bends put a heavy strain on outer fibers. To avoid excess bending, sheaves should be of suitable size for the diameter of the rope.

Don't overload. Rope loaded at more than 75 per cent of its breaking strength receives permanent injury. Use a 5-to-1 safety factor based on minimum breaking strength. In figuring this factor, make allowance for the age and condition of the rope.

Slack off guys. When ropes serve as guy lines or other supports exposed to weather, slack them off—especially in wet weather. Otherwise, the tautening rope may damage itself and what it supports.

Reeve ropes right. Small sheaves or pulleys put maximum strain on rope and increase the friction load in the block. Never use a smaller sheave than recommended for the size of rope used.

Don't lubricate rope. If a rope is well made and given proper care, lubrication at the factory should last for the useful life of the rope. Additional treatment of this kind is unnecessary.

Splice correctly. When lengths of

as smartly styled as if it came from a Fifth Avenue shop . . . and tops in eye protection too

that's the

NEW

Black Diamond

Quality

SAFETY SPECTACLE

by Wilkie GW

GW-50

Now you can answer your employees requests for really good looking safety glasses! They'll welcome the attractive, modern square shape of these fashion styled frames in two-tone black and crystal clear plastic . . . and **you** will welcome the absolute eye protection they provide! Here's complete protection—**plus** real good looks—**plus** economy!

This latest addition to the fine WILKIE line is available as follows:

Eye Sizes—44,46,48 MM

Bridge Sizes—20,22,24 MM plus 26 MM bridge in 48 eye

Lens Type—New square shaped S-7 lenses. No right or left.

Lens Color—Wilk-Safe Plano. 6.00 curve clear or Wilke-Glare green. May be ground to safety prescription

Temples—Spatula temples with 5-barrel hinge. Sizes 5¾, 6 and 6¼

Rocker Pads—If desired, use letter "R" after the number GW-50

Smart durable cases in green or black vinyl also available.

Dealer Inquiries Invited

WILKIE OPTICAL INC.

BARRINGTON, NEW JERSEY

Circle Item No. 81—Reader Service Card

Circle Item No. 82—Reader Service Card

THE Staplex
HI-VOLUME AIR SAMPLER
for your most exacting requirements

FOR INDOOR OR
OUTDOOR SAMPLING

Accurately samples to 1/100 of a micron . . indispensable for series or unit sampling . . portable . . inhales an entire area.

Used to measure air pollutants such as radioactive material, chemical dusts, smoke and smog, and in geodetic surveys, missiles research, mining, factory safety programs, plant and insurance inspections, etc.

Write for new brochure

THE Staplex CO.
AIR SAMPLER DIVISION

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NOTHING BUILDS
A SAFETY PROGRAM
LIKE WEARER APPEAL

*

New Exclusive!

WELSH TWO-TONE UNIBRIDGE Model 2200T

HANDSOME TWO-TONE, HIGH STYLING in seal brown color with most modern safety spectacle design appeals to wearer.

AUTOMATIC FITTING of more than 95% of employees saves time, cuts inventory needs.

ARE YOU SATISFIED with your eye protection program? Unless you can honestly answer "Yes", you owe it to your company and employees to try the safety spectacles by which all others should be judged.

WRITE FOR BULLETIN #43

WELSH
MANUFACTURING COMPANY
11 MAGNOLIA STREET, PROVIDENCE, R. I.

WELSH — *Willingly Worn by Workers Everywhere*

* Patented 1948
D 149870

Circle Item No. 83—Reader Service Card

rope must be joined, they should be spliced, not knotted. When a relatively small section of rope is worn or damaged, the section should be cut out and the remaining ends connected with a long or short splice, depending on use. A well-made long splice will retain up to 90 per cent of the rope's strength, but a knot keeps only 50 per cent of such strength.

Avoid sudden jerks or strains. Rope on tackle, slings, or lashings may be difficult to break with a steady, natural pull. Yet, these same ropes might easily part because of a snap.

Reverse rope ends. In using tackle, reverse the rope end-for-end periodically so all sections receive equal wear. Should it become badly worn on a short section, shorten the rope or cut out the section and splice. A good splice is safer than a damaged section.

Rope Slings

The safety of a sling assembly for special or ordinary work is determined by these factors:

Use of rope or chain and fittings of suitable strength for the load; method of fastening the rope or chain to the fittings; type of sling, such as single or three-leg; kind of hitch; regular inspection and maintenance.

The strength of fiber rope is affected by chemicals, freezing, high temperatures, and sharp bends.

Fiber rope is especially suitable for handling of loads that might be damaged by contact with metal slings. Manila rope also has the advantage of flexibility.

Wet rope or rope reinforced with metallic strands should not be used near power lines and other electrical equipment.

Precautions

Know the weight of the load. Then check the rope card for the proper size of rope.

Inspect blocks for general condition each time they come in from a job. Check for cracked shell and misalignment of sheaves. Sheave bearings and pins can be injured. Sheave sides may become so sharp that they cut the rope.

Make sure proper sized rope is

used near tackle. Charts issued by block makers give the rope sizes each block uses.

In making fast a length of rope, find a reasonably smooth surface and take sufficient turns to secure the rope correctly. Don't wrap the hauling part of a working line around your hand when applying force. If this type of handhold is necessary, throw an open hitch in the hauling part.

Fastenings. Success of any operation using rope depends largely on a splice, knot, or hitch. But rope fails often at fastenings. Each yarn and strand in the standing part bears its proper share of the load.

In all fastenings, the rope is cramped, distorted, or has a sharp bend. This places an overload on yarns most affected. These yarns part until the cramping effect is overcome; where this effect is not overcome, the rope is stranded and then parts.

Instruct workers in proper rope-handling methods, with a program showing definite fastenings for certain operations. Insist that these fastenings be used.

Treated rope. This includes flameproofed rope requested by bridge-building companies to form a life net under a bridge where the net might come in contact with hot rivets. Waterproofed fiber lessens the degree of absorption of the fiber and is generally desirable.

Marine growths sometimes seriously impair the durability of rope. Treatment with materials such as copper naphthenate, or an oleate makes rope resistant to many bacteria and growths.

Ordinary rope usually receives treatment making it impervious to mildew. However, manufacturers recommend that the rope be used with the same precautions as if it were *not* treated for mildew.

Many industries specify rope treated with pine or coal tar. Some of these treatments are available at an extra charge.

REFERENCES

Standard Methods of Testing and Tolerances for Rope Made from Bast and Leaf Fibers, D738-52. American Society for Testing Materials, Philadelphia, Pa.

Chapter 22, "Slings, Ropes and Chains," Fourth Edition, *Accident Prevention Manual for Industrial Operations.* To be published in October 1959.

Circle Item No. 84—Reader Service Card

● HORSE SENSE ABOUT **ATHLETE'S FOOT**

ONOX is used and approved by schools, clubs and over 70% of the largest industrial plants in the U.S.A.

Scientific research has upset old theories about Athlete's Foot. Skin specialists say that disinfectants are "futile, illogical, and potentially harmful."* They recommend *skin toughening* to make the skin resistant to fungus attack. That's good horse sense.

● **ŌNOX SKIN TOUGHENER PREVENTS ATHLETE'S FOOT**

Onox mineral salts toughen the skin . . . increase resistance . . . prevents fungus growth. No fungus . . . no Athlete's Foot. Bathers like Onox. And it costs only 1¢ per man per week.

● **TRY ONOX 60 DAYS AT OUR RISK** If not completely satisfied, you owe us nothing. Write for full details and ask for:

● **FREE FOLDER:** Facts on Athlete's Foot including medical opinions from *Archives of Dermatology and Syphilology.

ŌNOX INC. Dept. A, 121 Second St., San Francisco 5, Calif.
Warehouses: Brooklyn • Cleveland • New Orleans • Newark, California

the finest, most accessible, easiest-to-work-in
FIRE RESCUE SUIT
on the market today!

FIRE KING* by **WHEELER**

ANOTHER *Wheeler* EXCLUSIVE!

Here is the result of over 40 years' experience in rescue suit development. The Fire King is proven in actual use and has been accepted by industrial and civic fire fighting units. The exclusive Wheeler design means superior protection for you. Fire King can be put on faster, permits more body freedom, and resists fire better. It's undoubtedly the best fire suit you can buy.
Fight Fire with Fire King.

CONTACT YOUR WHEELER DEALER OR WRITE DIRECT

*Design Patented—Trade Mark Registered

Fast, portable case. Wall hung if desired. Fire King shown with air respirator

WHEELER PROTECTIVE APPAREL, INC.
226 W. Huron Street • Chicago 10, Illinois

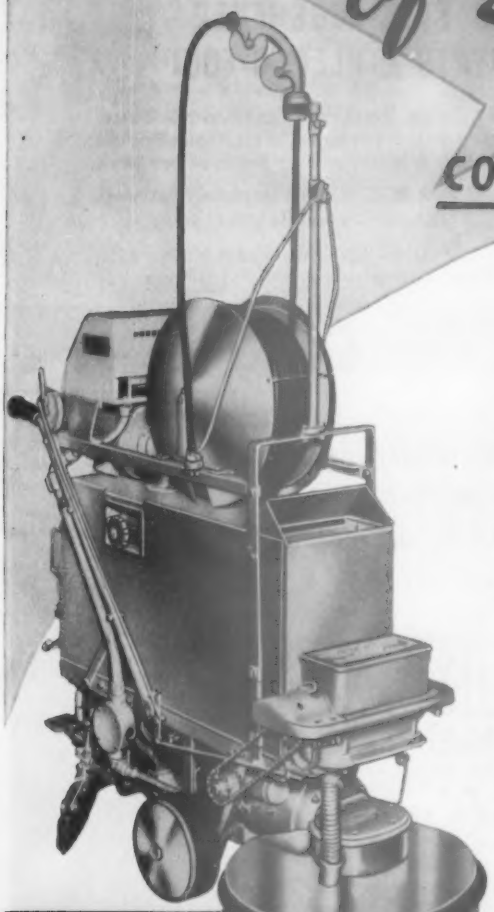
Circle Item No. 85—Reader Service Card

SMALL-AREA BUILDINGS...

Save 2/3 of Every Hour of Scrubbing Time

WITH A

COMBINATION SCRUBBER-VAC!



...Also can be used for dry work — steel-wooling, et cetera

(Powder Dispenser is an accessory)

Today, even buildings with but 2,000 to 15,000 sq. ft. of floor space can reap the labor-saving, cost-reducing benefits of *combination-machine-scrubbing*. Here's a *Combination Scrubber-Vac, Finnell's 418P* at left, that's specially designed for such buildings. This *electric* unit, with its 18-inch brush spread, cleans floors in *approximately one-third the time* required with a conventional 18-inch machine and separate vac.

The *418P* applies the cleanser, scrubs, and picks up (damp-dries the floor)—*all in one operation!* Maintenance men like the convenience of working with this single unit... the thoroughness with which it cleans... and the features that make the machine simple to operate. It's *self-propelled*, and has a *positive* clutch. There are no switches to set for *fast* or *slow*—slight pressure of the hand on clutch lever adjusts speed to desired rate. The powerful vac performs quietly. Compactly built, the *418P* also serves advantageously in larger buildings for the care of floors in narrow aisles and congested areas, and is available on lease or purchase plan.

Finnell makes *Scrubber-Vac Machines* for small, vast, and intermediate operations, and in *gasoline* or *propane powered* as well as *electric* models. From this complete line, you can choose the size and model that's exactly right for *your* job (no need to *over-buy* or *under-buy*). It's also good to know that *a Finnell Floor Specialist and Engineer is nearby* to help train your maintenance operators in the proper use of the machine and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2206 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES

Circle Item No. 86—Reader Service Card

New SAFETY EQUIPMENT

Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.

Lineman's Glove

A protective glove for those who work with high voltage is the "Red 'N Black" Glove. It has a black exterior and red interior. It is made of natural rubber by the standard multiple dip cement process. But in stead of a constant series of dips in black rubber solution, the first series is in red rubber solution.

The glove, produced for utilities, has a built-in warning feature which makes damage detection easier in field or laboratory inspection. If any damage to the glove results from snagging or cutting, the black exterior is penetrated, and the red interior flashes its warning that the damage is deep.

The red interior helps prevent reversal of gloves in use and storage. The red interior also makes it easy for the wearer to notice and wash off accumulated soil.

Charleston Rubber Co., 16 Stark Industrial Park, Charleston, S. C. (Item 301)

Explosion-proof Switch

Model 2CX3 is an enclosed switch, listed by Underwriters' Laboratories as being rain-tight as well as explosion-proof. It has an aluminum die-cast housing and dome cover and is designed for fuel handling equipment, rocket and missile-launching devices, industrial valve control systems and other hazardous outdoor installations.

UL lists the switch as suitable for Class I—Groups C and D; Class II—Groups E, F, and G.

The electrical capacity is UL-listed at 20 amps, 125, 250 or 460 vac. The model can undergo a 100-hour salt fog test without injury to the actuating mechanism or switching units.

Complete specifications are available in Data Sheet 156.

Micro Switch Div. of Minneapolis-Honeywell Regulator Co., Freeport, Ill. (Item 302)

Welding Goggles

A plastic eyecup is the principal feature of these welding goggles. Efficient anti-fog ventilation also is claimed.

Model 500 goggles feature the one-piece eyecup that conforms to facial contours. The eye area receives protection and light sources outside of the lenses are excluded. The manufacturer says these goggles are designed for acetylene welding and cutting, as well as for open hearth furnace work. A choice of lenses and lens shades is offered, including federal-specification grades.

Sellstrom Mfg. Co., 222 S. Hicks Road, Palatine, Ill. (Item 303)

Folding Stretcher

The UtiliPort is a lightweight folding stretcher weighing 7¼ lbs., yet is capable of supporting more than 400 lbs.

It is made of aircraft-type aluminum tubing and vinyl-impregnated nylon construction. The stretcher takes 37-in. by 3-in. storage space when folded, and unfolding to its 6-ft. 2-in. length is a fast operation.

The bed, made of abrasion-resistant, vinyl-impregnated, nylon, is durable. It is unaffected by moisture, mildew or rot and is resistant to gases, flame or cold.

The UtiliPort folding army-type stretcher comes with a choice of metal wall case or fabric carrying pouch.

Medical Supply Co., 1027 W. State St., Rockford, Ill. (Item 304)

For More Information—Circle Item Number on Reader Service Postcard

Disposable Garments

Radiation protective clothing for nuclear systems work includes medical and beret-style hats, shirts, pants, lab coats, aprons, boots, plastic shoe covers and translucent Pylox gloves. The garments are made of a non-woven fabric reinforced by nylon thread. The surfacing is cellulose wadding treated for fire resistance and water repellency. The garments are lightweight and can serve for visitors in plants where oil or chemical spray present a safety hazard.

Duck shoe covers in red and white, with elastic tops and protective plastic coating outside the soles, also are available and can be laundered at high temperatures without shrinkage.

Dust hoods, respirators and gas masks for protection against hazards—including radiation contamination—also are available.

Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, Pa. (Item 305)

Vacuum Cleaning System

The Exidust Central Vacuum Cleaning System consists of five components: cyclone-type primary dust separator, secondary bag type separator, exhauster and motor unit, piping system, and fixed pick-ups or flexible nozzles that handle dry clean-cut metal and plastic chips.

Illustrated is the flexible nozzle for operator's use; fixed pick-ups, fastened on a machine or where chips are formed, collect waste automatically.

The system, with a capacity ranging from 3 to 100 hp., safely gets rid of machine chips, especially flammable, like plastics; keeps the machine free of chips, lessening down-time or operational wear; and salvages scrap for re-sale or re-working.

Lamson Corp., Lamson St., Syracuse 1, N. Y. (Item 306)

Floor Matting

Nyracord is made from rubber combined with a reinforcing nylon synthetic fibre webbing. The finished floor matting is strong and withstands foot traffic, and destruction by spikes, cleats and skates.

Illustrated is a 5-ton tractor driven and spun over a ¼-in. Nyracord tile without noticeable effect on the tile. The tile is resilient, slip-resistant (wet or dry), durable, and is easy to clean.

The product withstands extreme temperatures and offers long life.

American Mat Corp., 1724 Adams St., Toledo 2, Ohio (Item 307)

Stainless Steel Safety Cabinet

A stainless steel, micro-biological, safety cabinet protects laboratory technicians from infectious micro-organisms, toxic chemicals, contaminated or infectious animals, and radioactive materials used in medical and biological research.

A filter canister, which can be mounted on the back or top of the enclosure, has three 500-w. electrical strip heaters with two layers of filter media.

The unit is thermostatically controlled to operate to 400 F. to destroy live micro-organisms or viruses. Cleaning and decontamination is possible by its seamless, crevice-free, round-corner construction. The safety cabinet is available in 36 or 48-in. lengths; its width from front to back is 26 in.; and its height is 28 in.

Two fluorescent lamps are enclosed in the stainless steel housing on top of the unit. A cold cathode sterile light, with low ozone output, is installed above the front window.

A viewing window on the sloping front provides visibility of the interior. The window is hinged to allow entry into the interior for cleaning or installing large equipment. Locking cams provide sealing of the window against the neoprene gasket.

S. Blickman, Inc., 8400 Gregory Ave., Weehawken, N. J. (Item 308)

Safety Spectacle

Tutone-frame safety spectacles are designed to meet the needs of plant management, personnel, visitors and others not directly engaged in activities requiring heavier eye protection.

The spectacle has a handsome two-tone frame of sheet stock cellulose acetate butyrate, and features a universal bridge to fit more than 90 per cent of users.

Interchangeable lenses are of superhardened glass, are pierce and impact resistant to give maximum protection. Spatula temples provide added comfort for men and women. The spectacle is available in eye sizes with clear lens or light, medium or dark green lenses.

Glendale Optical Co., Inc., 600 W. Merrick Road, Valley Stream, N. Y. (Item 309)

Industrial Eyewear Case

An open-end case for industrial eyewear provides protection, yet remains flexible and compact for carrying.

Model 5-37-97 case is of pig grain vinyl, stain-resistant and washable. A soft, urethane padding has been heat-sealed between the outer covering and the flocked vinyl lining to absorb shocks. The case edges have been sealed and stitched with heavy nylon thread to prevent ripping or tearing. A soft, smooth lining protects lenses against scratching. The case weighs less than two ounces.

Bausch & Lomb Optical Co., 635 St. Paul St., Rochester 2, N. Y. (Item 310)

Protective Heat Cloth

Protective heat cloth, consisting of aluminum sheet foil laminated on glass cloth fabric, is called "Ray-Foil." The fabric protects personnel by reflecting radiant heat.

The product is as flexible as a curtain, shield and panel, and will reduce maintenance and down-time.

As a curtain, Ray-Foil is available in 36-in. widths with panels buttoned together to make lengths or heights required. Eyelets are standard equipment on all four sides of the curtain.

The company can also supply a portable frame to which the curtain is attached. The frame is made of portable sections.

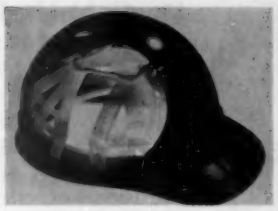
Frommelt Industries, 290 Main St., Dubuque, Iowa (Item 311)

Safety Shoes

Two styles in safety shoes are No. 672 (left) and No. 603. No. 672 is a Chukka, available in Sierra golden brown leather, Guillon tanned with a Bearfoot air cushion neoprene grit sole for slip protection.

Model No. 603 is a woman's safety shoe in tan leather with a "Step-easy" ripple sole.

Iron Age Safety Shoes, 1205 Madison Ave., Pittsburgh 12, Pa. (Item 312)



Safety Hats and Caps

A line of fiber-glass, aluminum and electrical (plastic) safety hats and caps has been developed for industrial, mill and mining applications, and features a polyethylene suspension. The suspension includes lock-straps at the peak of the suspension to assure 1¼-in. clearance between crown and hat shell, yet maintains adjustment provisions for crown depth fit.

A second feature is a plastic-zippered leather or leatherette sweatband which may be replaced. Although the suspension is removed or replaced, it may be left intact for cleaning or sterilizing. One hat or cap accommodates head sizes from 6⅝ to 8.

The hats combine lightweight, cool, well-ventilated wear with resistance to impact, penetration and shock. Fibre-glass, aluminum, and electrical liners are resistant to water or moisture absorption or corrosion, and reportedly exceed federal or other standards for hard hat safety.

A feature of the fibre-glass hats and caps is flame-retardent resin for fire resistance.

The fibre-glass, plastic hat and cap and suspension are free of metal parts. The aluminum line, excepting the aluminum shell, also is free of metal parts. A color selection, and a phosphorescent hat, are available for applications, such as in mines, where the glowing properties are desirable.

The electrical hat or cap is molded of resilient linear polyethylene. Insulating safety is present. Damage to the hat shell is instantly visible. A special feature of the aluminum line is the ribbing arrangement in the shell.

Boyer-Campbell Div., 6540 St. Antoine St., Detroit 2, Mich. (Item 313)

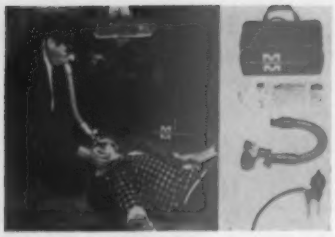
Cleaner, Anti-Fogging Liquid

A combination cleaner and anti-fogging liquid for lenses of safety glasses, shields, masks and other equipment is designed for industrial plants. It leaves no film and keeps lenses safety clear, as well as free of fog, in hot, steamy areas.

It is effective for the inside of windshields, windows, and foggable surfaces.

The liquid is furnished as part of a cleaning station for wall mounting, with disposable, lint-free tissues. It is supplied in pint and gallon bottles, as well as a 4-oz. squeeze-spray bottle for individual use.

Albert W. Pendergast Safety Equip. Co., 6936 Tulip St., Philadelphia 35, Pa. (Item 314)



Mouth-to-Mask Resuscitator

The M/M Mouth - to - Mask Resuscitator is an extension of the mouth - to - mouth technique.

The M/M resuscitator eliminates intimate contact. The valve permits passage of air only from the rescuer to the victim. The first air which the victim receives in each breathing cycle contains the full oxygen content of surrounding air.

At no time is the patient's breath inhaled by the operator. Use of this resuscitator places the rescuer at the patient's head far enough away to monitor chest movement and color of lips without interrupting the rhythm of breathing. The oronasal face mask insures a a tight seal.

Globe Industries, Inc., 125 Sunrise Place, Dayton, Ohio (Item 315)

Static-Free Work Clothes

Lightweight, chemical-resistant, anti-static work clothes of 100 per cent Dynel are designed for electroplating, chemical, petroleum refining or other industries where job conditions might deteriorate ordinary clothes.

Shirts, trousers, coveralls and full length lab coats in medium gray color are cut from 6-oz. twill fabric called "Dynadure".

Dynel fibre is inert to attack from acids, alkalies and other harsh chemicals and will not flashburn.

The fabric is treated with durable anti-static finish, guaranteed to last throughout the life of the garments.

Worklon, Inc., 253 West 28th St., New York, N. Y. (Item 316)

Soldering Iron Holder

Model 55 Soldering Iron Holder is for irons with a heating element casing having a diameter up to 1¼-in. Model 55 is equipped with a lead-in cone at the front and a removable back plate to facilitate the cleanout of solder dripping.

This model can be moved to any position on the holder clamp and can be fastened to brackets for bench mounting as illustrated—or moved to forward holes for under-bench mounting.

Model No. 54 is for pencil-type soldering irons with a heating element casing up to ¾-in., while Model No. 53 is for small expendable-type irons. It has an inner cylinder diameter of 1¼-in.

Also available is a wiping pad suitable for holder, plus special attachments to meet special requirements.

Wilder Mfg. Co., Dept. XX, Mechanic St. & Erie R. R., Port Jervis, N. Y. (Item 317)

Soft-side Goggle

Better working vision reportedly is provided with this soft-side goggle.

The angled lens and the transparency of the frame offer working and peripheral vision. Three-hundred per cent more top ventilation prevents fogging. A permanent locking pin in every lens assures positive lens assembly.

The goggles fit over the largest prescription glasses, and are available in ventilation styles covering regular conditions, dust, acid and splash, no ventilation for vapor, and perforations on the side and bottom only for acid and splash.

Welsh Mfg. Co., 11 Magnolia St., Providence 9, R. I. (Item 318)

Pull-Back Safety Device

Pull-back safety devices, designed for protection of punch press operators, are adaptable to toggle presses, embossing presses, press brakes and drophammers.

The operator, after placing the stamping between the dies, takes his hands to a safe position when reaching for the material. If he should fail to do this, the device physically pulls his hands away before the press ram nears the pinch point. There is no jerk or pull, unless the operator is in danger.

This pull-back action is performed by steel cored cables fastened to wrist bands on the operator's hands. The pull-back is actuated by a multiplier, consisting of a gear, rack and cam, connected by a rod to the press ram below any possible breaking point.

The multiplier is geared to a 7:1 ratio on the first part of the stroke, providing operation on short stroke presses, or for spring die or drawing applications.

The device can be floor-mounted or suspended from the ceiling or beam extending from the top of the press. Wrist bands can be furnished of leather or a nylon webbing.

Positive Safety Mfg. Co., 4408 Perkins Avenue, Cleveland 3, Ohio (Item 319)

Germ Killing Floor Wax

Demon liquid floor wax kills germs on contact and prevents the growth of many kinds of bacteria.

By combining a derivative of Bithionol, a germicide, the wax is self-sanitizing, non-toxic, non-skid and high gloss. The wax reduces continuously by 91 to 98.1 per cent the number of bacteria on floor surfaces.

The wax effected a 97.57 per cent reduction in the bacterial count in 10 minutes contact. After the 14th day of initial application, tests indicated a 98.1 per cent reduction in bacteria.

It can be used on flooring materials including asphalt, rubber and vinyl tile. The wax dries in 20 minutes.

Penetone Company, Tenafly, N. J. (Item 320)

Goggle Cleaning Station

A goggle-cleaning station is said to have fingertip convenience.

It has a compact all-metal cabinet with a capacity of 200 sheets and provides a fresh tissue each time one is removed. The cabinet measures 6-in. high, 5¼-in. wide and 6-in. deep.

Lens-cleaning fogproof fluid is dispensed from leakproof polyethylene squeeze bottles which can be used in locations that do not warrant cabinet installations. Cleaning and anti-fogging agents of the fluid remove dirt and grime without streaking and coat the lens surface with a film that protects against fogging for hours.

Mine Safety Appliance Co., 201 N. Braddock Ave., Pittsburgh 8, Pa. (Item 321)

Truck Loading Plates

Lightweight dock plates feature safety tread surfaces for power truck traction. They are designed for truck loading operations and are made of strong, light metal alloy.

The plates are available in standard 48-in. widths from 24 to 60 in. long. Load ratings range from 1,000 to 5,000 lbs. axle load.

Additional features include: positive position stops to lock the board in place between the dock and carrier; beveled plate edges to minimize load jar and prevent load loss; and the crowned construction facilitates safe crossover and prevents "hang up" of low underclearance equipment. The plate edges have yellow Safe-T-Lane markings.

Magline Inc., 1900 Mercer St., Pinconning, Mich. (Item 322)

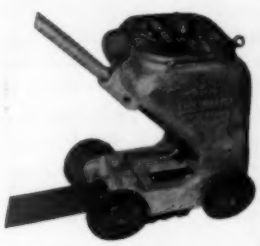
Lightweight Safety Cap

This cap is for head protection in a range of light and medium industrial applications. It weighs less than 8-oz. and is made of contoured polyethylene with a shock-absorbing, acetate, adjustable headband, and a plastic foam cushion on the inside of the crown. The cap is made in a peaked-cap model for easier access to cramped locations. It is available in a range of colors.

Impact resistance is high for lightweight safety cap. It may be worn by technicians and workmen in tight working quarters, light construction and maintenance workers, and mechanics.

It does not protect against heavy falling objects. The cap is available with sound-attenuating equipment for airlines maintenance personnel. Winter lines are also available.

Gentex Corp., 450 Seventh Avenue, New York 1, N. Y. (Item 323)



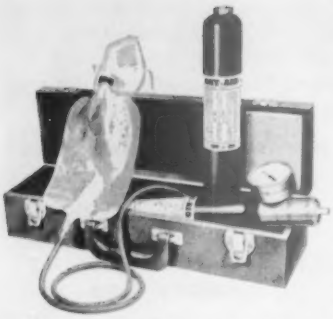
Line Marker

A line marker produces clean, sharp lines for controlled line marking in warehouses, parking lots and stalls, and industrial and safety guide lines. The marker produces up to 500 ft. of clean-cut lines before refilling. Straight, curved, or skip lines are made at walking speed.

The paint flow is gravity-fed on the surface to be marked, eliminating fire and explosion hazards and mist damage to stock, machinery and automobiles. The flow is controlled at the handle grip for maximum efficiency and can be regulated, depending on the type of surface being marked and the speed of application.

The marker weighs 10 lbs. Interchangeable fiber brushes produce 2, 3 and 4-in. wide lines. A straight through valve from the tank permits recovery of paint after completion of the job.

Cost Reduction Equipment Co., 5200 Chakemco St., South Gate, Calif. (Item 324)



Emergency Oxygen Inhalator

This inhalator cylinder holds 15 gallons of compressed oxygen and has a closing valve which opens automatically as the cylinder is tightened by hand.

An automatic pressure-reducing regulator which releases the oxygen at 6 liters per minute provides a 12 minute supply per cylinder. The attached gauge indicates the pressure remaining and warns when a refill is needed.

Partly loosening the cylinder stops the flow of oxygen.

Loosening the cylinder completely detaches the cylinder and permits a full reload in 30 seconds.

The unit is convertible. Regulator, bag and mask may be used on larger-sized cylinders.

Untrained personnel can handle the unit and do not need to hunt for tools in an emergency.

Oxy-Aid Scientific Corp., 137 E. 57th St., New York 22, N. Y. (Item 325)

Sweatbands

An elastic band holds a light, four-ply, absorbent Sweatband in place. The economical sweatband can be thrown away, when desired, and no pre-wetting is required. There are no metal parts and no potential irritations. It can be used with helmet or goggles.

The sweatbands keep the worker cool, safe, efficient. Sweat cannot blur vision or carry foreign matter into or sting the eyes.

General Bandages, Inc., 8300 Lehigh Ave., Morton Grove, Ill. (Item 326)

Boxboard Non-skid Coating

The danger of boxboard carton slippage during handling, palletizing, stacking and shipping can be reduced by application of a non-skid coating to the sheet box board in the manufacturing process. The coating, collodial silica, raises the coefficient of friction to more than 150 per cent.

Application of the coating is made at the boxboard corrugator by a spray applicator. The applicator operates automatically. It offers efficient frictionizing with colloidal silica materials, such as DuPont's "Ludox" and Monsanto's "Syton P."

The spray film treats the boxboard surface to provide sharp, clean impressions reportedly with better color from less ink.

Ortman-McCain Co., 1330 W. Washington Blvd., Chicago 7, Ill. (Item 327)

Hazardous Areas Handling Equipment

Conventional handling equipment cannot be used where flammable fumes and/or organic dusts in explosive concentrations in the air create a hazard.

The requirement in the construction of trucks for such atmospheres is that no sparks or flames may be emitted to the ambient explosive atmosphere. Motors, switches and similar electrical components must be enclosed in suitable housings. Present models are safe and provide for reasonable access for service and maintenance operations.

The operator stand-on and walk-along models of the Go-Getter Series 54.00 feature these requirements for hazardous atmospheres. Model 54.22 high-lift straddle type fork truck incorporates such features as anti-kickback steering and carries Underwriters' Laboratories label for type EX for use in Class 1, Group D Explosion Hazardous Areas.

Revolvator Co., Inc., 8600 Tonnele Ave., North Bergen, N. J. (Item 328)

Dust Sampler

An Iso-Kinetic Dust Sampler measures dust particles discharged from dust control equipment and determines equipment operating efficiency. The device will enable companies to conduct dust control measurements.

The sampler will measure grains of dust passing through dust control ducts, or measure particles discharged from dust control equipment, such as cyclones and equipment exhausting to atmosphere.

The sampler assembly consists of a rotometer, air-line filter, air pump, oil reservoir, oil trap, electric motor, plastic air-line tubing, rod handle, graduated rod, filter thimbles, thimble holder, thimble ring seals and nozzles.

The Day Co., 810 Third Ave., N. E., Minneapolis 13, Minn. (Item 329)

NEWS ITEMS

R. E. Boak

Walter Kidde & Co., Inc.

Robert E. Boak has joined this Belleville, N. J., company and will serve as manager of wholesale sales for the company's Industrial and Marine Division, which markets fire extinguishing equipment.

The company also announced the opening of a new Atlanta, Ga., sales and service facility at 1882 Marietta Boulevard N. W.

Pioneer Rubber Co.

Conney Products Company, Inc., 174 W. Division St., Fond du Lac, Wis., has been named distributor for the line of industrial glove products manufactured by this Willard, O., glove company.

Conney will distribute the company's Stanzoil, Stanflex, Pacemaker, Sheergrip and Nimble Fingers industrial gloves throughout Wisconsin, Minnesota, Illinois and Indiana.

D. B. Callaway

Industrial Acoustics Co.

Daniel B. Callaway, former chief engineer of the sound control department of The Koppers Company has joined Industrial Acoustics and will supervise the company's West Coast activities and provide western regional engineering service for noise control products.

Johnson-March Corp.

Johnson-March Corp., manufacturer of dust control equipment, has moved its offices to 3018 Market St., Philadelphia 4, from its former location at 1724 Chestnut St., Philadelphia. The move includes offices of the firm's two subsidiaries, Waverly Petroleum Products Co., manufacturers of oil and grease absorbents, and Sani-Mist, Inc., manufacturers of products for the prevention of athlete's foot.

The move was announced by Edward F. Frankel, president of all three firms.

Fine Organics, Inc.

Jim Raney, R & M Sales Company, 2214 South Clayton St., Denver, Colo., has been appointed sales agent for Fine Organics, in Colorado and Wyoming.

Mr. Raney has a background in the electric utilities field and will handle their line of solvents for industry.

T. M. Geraghty

DeWalt Division American Machine & Foundry Co.

Thomas M. Geraghty has been appointed assistant to the vice-president of sales for DeWalt Division of this Lancaster, Pa., manufacturer of radial-arm wood and metal cutting machines.

He will be responsible for the coordination of product distribution and field sales liaison activity. He has been with the company since 1953.

J. P. Lytle

Mine Safety Appliances Co.

MSA has announced several appointments.

John P. Lytle has been promoted to manager of engineering, safety products division, at the company headquarters in Pittsburgh.

B. G. Tarkington has been assigned as a safety products sales engineer in Memphis, Tenn., and Richard A. Yost has been appointed as safety products safety engineer in Akron, Ohio.

H. V. Gates

Glendale Optical Co.

A new warehouse distributor on the West Coast will handle Glendale's industrial optical safety equipment line in a seven-state area.

Fibre-Metal Pacific Company, Inc., 7332 South Garfield Ave., Bell Gardens, Calif., will distribute the company's products. H. V. "Vern" Gates has been appointed to head the new distributorship as general manager. The warehouse will handle a line of head, face and eye protection equipment.

Ansul Chemical Co.

J. H. Jarret R. W. Drebus E. A. Beacham

Three promotions have been announced in the sales organization of this Marinette, Wis., manufacturer of fire protection equipment.

Jay H. Jarret has been named assistant to the sales vice-president. Richard W. Drebus is now director of marketing and administrative services in the company's sales division, and Edward A. Beacham has been selected manager for refrigeration sales development.

Mr. Jarret will be in charge of sales analysis control, sales coordinating services and refrigeration sales development. Mr. Drebus will be responsible for the Special Hazards Department, Marine Department and fire equipment sales development.

D. O. Carlson

B. F. Goodrich Footwear and Flooring Co.

Donald O. Carlson has been appointed Mid-West Representative, Industrial Footwear and Gloves, by this Watertown, Mass., manufacturer. He will headquarter at the Chicago branch office and will cover the mid-western territory.

Fire Equipment Manufacturers Association

A. C. Trautwein, senior vice-president, marketing, The Fyr-Fyter Co., was elected president of the Fire Equipment Manufacturers Association during the recent annual meeting.

Stewart Boal, president of Randolph Laboratories, Inc., was elected vice-president; and G. J. Halpin, vice-president-sales, American LaFrance Division of Sterling Precision Corporation, was named treasurer.

The three officers will serve on the Association's Board of Directors. Other members elected during the New York meeting are: R. L. Weir, Elkhart Brass Mfg. Co., Inc., and L. C. McKesson, vice-president, sales, Ansul Chemical Company. A. D. Symonds, W. D. Allen Mfg. Co., also serves on the Board.

FEMA member-companies manufacture and market portable fire extinguishers and related fire extinguishing equipment.

Safety First Supply Co.

George Heard, former manager of Dravo Corporation's contract department in heating and air-conditioning, has been elected president of this manufacturer and distributor of safety equipment for industry. He succeeds George S. Shull, named chairman of the Board.

The company produces safety items, such as life vests, foot protectors, goggle cleaning stations, etc., and distributes other safety items.

W. M. Mollison

The Boyer-Campbell Co.

William M. Mollison has been appointed to the sales staff of the Safety Products Div. and will be responsible for the Western Michigan territory. Mr. Mollison has served as general manager of the Detroit office of the Abrasive Company of America and has represented the company in Michigan. Boyer-Campbell has headquarters in Detroit and distributes and manufactures safety equipment.

John B. Moore Corp.

Irving Q. Sarlin has been re-elected president of this manufacturer of safety solvents.

Mr. Sarlin was re-elected at the home office in Nutley, N. J. Other officers elected were: Horace A. Teass, secretary-treasurer; Robert L. Klaas and W. Rand Campbell, assistant treasurers.

W. J. Smith

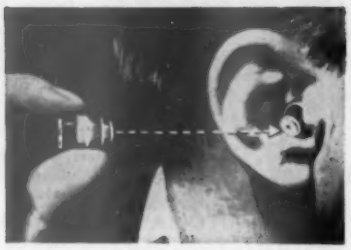
Thom McAn Safety Shoe Div., Melville Shoe Corp.

William J. Smith has been elected vice-president of Thom McAn safety shoe division. He has been general manager of the operation since 1948.

With the company since 1932, when he began as a retail shoe salesman, he will be located at the company headquarters at 25 West 43rd St., New York.

Circle Item No. 87—Reader Service Card

HARMFUL Effects of NOISE to The EAR DRUMS ELIMINATED by *Lee Sonic* EAR-VALVS



A FREE 30 Second Demonstration will PROVE this BEYOND QUESTION We GUARANTEE THAT! Remember they are NOT EAR PLUGS! They are scientifically developed sound controls that protect the ear drums without interfering with normal conversation or sound. We'll gladly send you a pair for actual demonstration. THEN you will find out why they are recommended and used wherever NOISE is a HAZARD and a deterrent to normal production. Send for your demonstration pair TODAY on company letterhead. No obligation to purchase.

SIGMA ENGINEERING COMPANY
1491 Vine St., Dept. N, Los Angeles 28, Calif.

HAV-ALIFT PLASTIC SALT DISPENSERS

The popular Regulated and Coated Hav-aLift Salt and Salt & Dextrose Tablets are now available in a completely new all-plastic Disposable Dispenser.

Write today for sizes and prices on these new Disposable units and the name and address of the dealer nearest you!!

A. E. Halperin Co., Inc.
75 NORTHAMPTON ST.
BOSTON 18, MASS.
YOUR SAFETY—OUR BUSINESS

Circle Item No. 88—Reader Service Card

The Diary

—From page 30

It was interesting that none of us reported a fatal accident as the worst moment in our careers. John's worst moment came only three years ago when he got overly emphatic in a discussion with a branch plant manager, got this man riled, and was ordered out of the manager's office and out of the plant.

"I could deal with the problem," John said. "I had to deal with it. But I had to go to the top, had to invoke authority, had to fight stubbornly against the manager and his staff. All the time, I had known the guy was thin-skinned, pompous, unforgiving. But I let myself pop off, and in doing so, I could easily have caused serious trouble. I played that interview over in my mind for a month every night before I went to sleep."

Lonny's worst moment had been the collapse of a building during the war, and the nightmare of searching the wreckage—in which there was not a single dead body.

My own worst moment—and I had to choose it from among a number of close competitors—was a conversation with a subordinate who was convinced, with some justice, that I had failed the safety cause by not standing up and doing all-out battle in a budget meeting. It wasn't just losing the best assistant I ever had—for that matter, it was time for him to go on his own. But what hurt was knowing that he felt that I had betrayed him and the work.

The things we most hate to keep on doing vary:

John hates above all the routines of paper work and statistics.

Lonny hates most of all the drudging, nagging, shoving job of inspection, and prodding people to act on data turned up by inspections.

And I, what I hate most of all, because I feel insecure at it, is the high-level management conference in which I have to fight for the safety interest against competing interests from other departments with more skillful representatives in the bureaucratic in-fighting.

Strangely, though our dislikes and our worst moments were so

national's Chemsearch Concentrate cleans everything

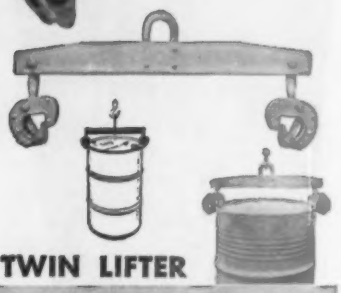
National's CHEMSEARCH CONCENTRATE is the universal cleaner for every washable surface! It can be used safely on floors, walls, windows, woodwork, desks, leather and plastic upholstery, steel, porcelain, hard tiles, and other surfaces. It leaves no film, is non-abrasive, non-caustic, contains no soap, acid, ammonia or free alkali. It requires no rinsing. Use National's CHEMSEARCH CONCENTRATE for all surface cleaning.

A PRODUCT OF NATIONAL RESEARCH

national
DISINFECTANT COMPANY
2417 Commerce, Dallas
906 S. Seventh, St. Louis

Circle Item No. 89—Reader Service Card

YOUR BEST MOVE . . . MOVE
with MERRILL
MATERIAL
HANDLING
DEVICES



For Interesting Information write

MERRILL BROTHERS

56-28 Arnold Ave., Maspeth, N. Y.
3-R-6

Circle Item No. 90—Reader Service Card

varied—each of the three of us had essentially the same defense against being crushed by what we do not like.

Lonny phrased it this way—but it is exactly what John or I would say as well: "The whole job's worth doing. I'll buy the part I hate to get the whole job done right."

In the cab heading back to the hotel, John asked, "Did we learn anything."

I said, "I don't know. Maybe our answer was right. Maybe crack-up comes just as soon as a man stops believing the whole job is so important, it more than pays for the parts of it that we hate to do."

Lonny said, "I think that's right. But what makes a man lose that feeling, sometimes after years of successful work in the field?"

"I don't know," I said. "I hope I never learn."

VOICE OF THE READER

Let's have your view on current topics. You don't have to agree with us

A Sales Job

QUINCY, ILL. Your May issue is certainly outstanding. In my opinion, it's the best in the three years I've been reading it. The feature stories seem to have more general interest and more punch than in your usual good issues.

I like the feature, "Ideas That Worked." Being primarily interested in sales promotion, working at safety on the side, I'm always on the lookout for ideas that have been successful with other companies.

Safety to a great extent is like selling; you need fresh, different ways to sell men on being careful. Any time you can run articles or pictures or drawings in your magazine that stimulate the thinking of safety folks, you're doing a swell job.

—WILLIAM B. RAUFER,
Sales Promotion Manager

Circle Item No. 91—Reader Service Card

THE POSITIVE LADDER SAFETY DEVICE LOCKS-IN-A-NOTCH

Prevents death and injuries from falling.

If climber starts to fall, device locks in a deep notch on carrier rail and limits fall to approximately 6 inches — distance between notches.

LOCKS AUTOMATICALLY and INSTANTLY—HOLDS SECURELY

Will catch and hold workman if he starts to fall, even if unconscious. Cannot slip on down ladder. Requires no attention from climber; he climbs in normal manner. Inexpensive. Easy to install; 3 men can clamp it to ordinary ladder in few hours. Clamps to any rung ladder, peg ladder, pole or framework. No welding or cutting. Notched rail hot-dipped galvanized. Entire equipment rust and corrosion proof. Can be kept free of ice by applying heat inside the carrier rail. In use approx. 11 years. Approved by Safety Engineers and Govt. Agencies throughout country. Patented. Manufactured only by

SAFETY TOWER LADDER CO.
1024 Burbank Blvd., P.O. Box 1052
BURBANK, CALIFORNIA

SAFETY ENGINEERS

Foreign Employment

Career opportunity for graduate engineers with minimum 5 years practical safety engineering experience in all operations, heavy industrial or chemical industries.

Must know A. P. I. codes and be familiar with hazards peculiar to oil industry. Capable of planning, developing and obtaining acceptance and support for complete accident prevention program.

Write outlining experience and personal history to:

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Arabian American Oil Company
505 PARK AVENUE
NEW YORK 22, N. Y.

TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.

Paint for Fire Protection

Safe fire retardant paints decorate, stop flame spread, and insulate. They are easily applied with brush, spray or roller, and are available in full range of colors. Bulletin gives details. Baltimore Paint and Chemical Corp., 2325 Anapolis Ave., Baltimore 30, Md.

For more details circle No. 400 on enclosed return postal card.

Hazard Warning Equipment

Bulletin LL-6807, available from R. D. Fageal Co., Kent, Ohio, describes that company's line of heavy-duty flasher safety lights and barricades, designed for maximum visibility, easy handling and storage, guaranteed hazard warning protection.

For more details circle No. 401 on enclosed return postal card.

Permanently Destroys Weeds

Veg-Out is a montoxic, nonselective weed killer that attacks all vegetation and delivers permanent kill, yet is safe to use around humans and animals. It may be applied by hand or mechanical sprayer in any season. Literature gives details. National Disinfectant Co., 2417-19 Commerce St., Dallas 26, Texas.

For more details circle No. 402 on enclosed return postal card.

Protects Metal Against Rust

Rust-Oleum resists sun, moisture, heat, fumes, rain, snow and weathering. Applicable with brush or spray, it stops rust while it decorates. A new 36-page catalog shows colors and applications. Rust-Oleum Corp., 2672 Oakton St., Evanston, Ill.

For more details circle No. 403 on enclosed return postal card.

Kills Odors—Free Test Samples

When you use Ozene, you're taking a quick, easy step toward odor control. Ozene masks odors while it attacks their causes—sulphide-forming bacteria and mold microorganisms. For details and a free test sample, write Allied Chemical, Solvay Process Division, 61 Broadway, New York 6, N. Y.

For more details circle No. 404 on enclosed return postal card.

Magnetic Drill Stands

This 4-page bulletin No. 10406 describes precision drilling possibilities in difficult or remote areas, and gives information on three new presses for air or electric drills up to 2-in. capacity. Thor Power Tool Co., 175 N. State St., Aurora, Ill.

For more details circle No. 405 on enclosed return postal card.

Radiation Signs

Radiation signs, which conform in color to standards specified by the Atomic Energy Commission, are reviewed in a new bulletin issued by the Ready Made Sign Co., 115 Worth St., New York. A price chart, covering sizes and styles, is included.

For more details circle No. 406 on enclosed return postal card.

Eyewash Fountain

Literature prepared by the Halsey W. Taylor Co., Warren, Ohio, features eye wash fountains, drinking faucets, and electric coolers. The eye wash fountain has a self-closing, cross-handle stop with volume regulator and two 40-stream projectors that provide soft eyewash streams. All exposed fittings are chromium plated.

For more details circle No. 407 on enclosed return postal card.

Work Clothing

Acid- and caustic-resistant work clothing in the latest miracle fabrics, including Dacron, Orlon, and Dynel, are reviewed and illustrated in a new brochure available from Worklon, Inc., 253 W. 28th St., New York. The line includes uniforms, coveralls, and shop coats. Sturdy wearing qualities, attractiveness, and comfort are among advantages of this clothing, the catalog says.

For more details circle No. 408 on enclosed return postal card.

Waterless Skin Cleanser

A waterless skin cleanser that removes stubborn soil without harming the hands is safe, and usable on the job site. This saves time-consuming trips to the washroom. The cleanser has a pleasant, clean odor. Details are contained in literature available from Sugar Beet Products Co., Saginaw, Mich.

For more details circle No. 409 on enclosed return postal card.

Trash Cans

Booklet illustrates and describes Witt Trash Cans. Among construction features cited are: straight sides, structural steel bands, heavy-duty steel, wear-resistant bottom, deep-rolled corrugations, sturdy lid, pinch-proof handles, and hot-dip galvanized finish for rust protection. Witt Cornice Co., 4454 Steel Place, Cincinnati 9, Ohio.

For more details circle No. 410 on enclosed return postal card.

Fire Hose Washer

Bulletin describes a fire hose washer-drainer that cleans without detergent, uses clean water in the process, and washes and drains in one operation. Hose is pulled through this washer on edge, where it is scrubbed by four high-speed fibre brushes and rinsed by four spray nozzles. Circul-Air Corp., 577 E. Milwaukee, Detroit 2, Mich.

For more details circle No. 411 on enclosed return postal card.

Fire-Fighting Foam

Unox is described by the manufacturer as a 4-dimensional fire-fighting foam that smothers fires, quickly covers and controls spill fires, penetrates to the heart of the fire, and has a cooling effect in that it absorbs heat. Details are in a brochure issued by Akron Brass Mfg. Co., Foot of Spruce St., Wooster, Ohio.

For more details circle No. 412 on enclosed return postal card.

Acoustical Ceilings

You can reduce noise irritations and strengthen plant fire protection at the same time by installing acoustical ceilings. A new 35-page booklet issued by Armstrong Cork Co., Lancaster, Pa., gives details on acoustical materials. Performance charts on materials are helpful.

For more details circle No. 413 on enclosed return postal card.

Resuscitator

A resuscitator, which automatically gives mouth-to-mouth and nose-to-nose assistance at the same time, has an automatic pressure valve. The manufacturer reports it's a safe manual method for victims with injured chest cages or fractured arms. Details are in a brochure prepared by Globe Industries, Inc., Medical and Hospital Div., 125 Sunrise Place, Dayton 2, Ohio.

For more details circle No. 414 on enclosed return postal card.

Fire-Fighting Apparatus

This fire extinguisher catalog contains facts and figures of interest to fire protection officials in industry. M. L. Snyder and Son, Jasper and York Sts., Philadelphia 25, Pa.

For more details circle No. 415 on enclosed return postal card.

Floor Absorbent

A free sample of a floor absorbent is offered by Wyandotte Chemicals Corp., Wyandotte, Mich. The new product, "Blot," quickly can absorb 150 per cent of its weight in oil, does not become slippery when wet, and is nonflammable.

For more details circle No. 416 on enclosed return postal card.

Fire Retardant Paint

Free folder on fire retardant paint describes a paint, U. L. approved, which can be brushed, sprayed or rolled on, and is available in seven colors. E. I. du Pont de Nemours & Co., Finishes Div., Dept. N.S.N., Wilmington 98, Del.

For more details circle No. 417 on enclosed return postal card.

Single Bridge Hand Traveling Cranes

A 4-page folder, Bulletin DH-468-B, has been issued by Wright Hoist Div., American Chain and Cable Co., Inc., York, Pa. It contains data of interest to plant operating personnel on the Type B-9 Top Running, Single Bridge, Hand Traveling Crane manufactured in capacities of 1 to 10 tons and in spans up to 50 ft. These cranes, having a safety factor of 5 to 1, find industrial applications where accurate spotting of loads is more important than fast travel speeds.

For more details circle No. 418 on enclosed return postal card.

Truck Batteries

Storage batteries that boost work capacity of electric trucks are described in 8-page bulletin No. 6230. Batteries can be used interchangeably in more than one size truck. Exide Industrial Div., Electric Storage Battery Co., Rising Sun and Adams Ave., Philadelphia.

For more details circle No. 419 on enclosed return postal card.

Sound Level Meter

A sound level meter is covered in a General Radio Co. bulletin. The bulletin reports meter frequency response has improved because of: smoother microphone characteristics; new attenuator, new amplifier with greater band width; weighing networks that fit ASA design requirements more closely; new indicator with no frequency error. General Radio Co., West Concord, Mass.

For more details circle No. 420 on enclosed return postal card.

Warning Signs for Petroleum Industry

A color catalog illustrates company's complete line of warning signs. Persons involved in producing and processing petroleum products will find this catalog helpful in selecting signs to fill standard safety requirements. Included are 65 *Danger* signs, 16 *Caution* signs and 62 other warning signs. A special section on reflectorized stock traffic signs for refining yards is included along with prices California Metal Enameling Co., 6904 E. Slauson Blvd., Los Angeles 22, Calif.

For more details circle No. 421 on enclosed return postal card.

Vital Links to Safety

The McKay Co., 1005 Liberty Ave., Pittsburgh 22, Pa., has published a 12-page booklet, *Vital Links to Safety*. The booklet gives fundamental cautions for chain safety. The catalog is divided into five sections:

Chain Safety Terms—includes definitions of working load limits, proof test, minimum break loads; Proper Use of Chain—explains how to clean and maintain a safety chain maintenance system; Safety Cautions—explains how to check for stretch and wear of chain. Table shows the maximum allowable wear on various chain sizes; Proper Inspection—step-by-step inspection procedure for effective maintenance of sling chains; Working Load Limits—contains charts that show safe working load limits for the standard, single, double, triple and quadruple branch slings from ¼ in. to 2 in. diameter.

For more details circle No. 422 on enclosed return postal card.

Flashes Hazard Warnings

Porto Safety Flasher, designed for emergency and non-emergency use by law enforcement agencies, utilities and civil defense groups, gives 70 clear warning flashes per minute for 100 continuous hours. It operates on 4-standard flashlight batteries, weighs 4 lbs. and folds to a length of 26½ in. Literature gives details. Phillips Mfg. Co., Inc., P. O. Box 2219, Wichita 1, Kan.

For more details circle No. 423 on enclosed return postal card.

Engineered Sanitation Supplies

This catalog and maintenance guide contains information designed to solve sanitation and building maintenance problems in industrial plants, hospitals, hotels, etc. Hundreds of labor and expense-saving products are illustrated and described: new disinfectants and deodorant; safer, powerful insecticides and pest control products; fast-acting cleansers and detergents and others. George B. Robbins Disinfectant Co., Cambridge, Mass.

For more details circle No. 424 on enclosed return postal card.

Protection for Insecticide Users

"Useful Information for Users of Insecticides and Fumigants" is the title of bulletin No. 591 made available by Acme Protection Equipment Co., 1201 Kalamazoo St., South Haven, Mich. This 4-page bulletin assembles information on history, use, hazards, and protection for users of modern insecticides—and describes mask equipment.

For more details circle No. 425 on enclosed return postal card.

Guide to Use of Plastics—Production and Maintenance

Commercial Plastics and Supply Corp., 630 Broadway, New York 12, has issued a 8½ by 11 in. *Guide to Use of Plastics in Production, Maintenance and Safety Applications*. This can be slipped into an engineer's notebook, or pasted up on the shop bulletin board. With the *Guide* are helpful hints on proper storage and care of plastic sheets, rods and tubes. Column headings read: "Kind of Plastic," "General Uses," and " Safety Characteristics."

For more details circle No. 426 on enclosed return postal card.

Straddle Scaffold

Atlas Industrial Corp., 849 39th St., Brooklyn, announces introduction of the "Straddle Scaffold." It is designed for use over desks, machinery, tables, seats, etc., in painting, cleaning, lamping and repairing. This scaffold may be built to meet individual requirements as to size of work platform, and height to be reached. It comes assembled. It is of all welded steel construction with outriggers for stability.Literature gives full details.

For more details circle No. 427 on enclosed return postal card.

Electric Hoists

Bulletin 158-G describes the line of CM Lodestar Electric Hoists, including the three larger capacity and higher-speed models recently introduced. Lodestar Hoists are available in capacities from ⅛ to 2 tons with a wider range in lifting speeds. Chisholm-Moore Hoist Div., Tonawanda, N.Y.

For more details circle No. 428 on enclosed return postal card.

Power for Lift Trucks

Detailed information on Towmostatic Drive, a method of power application for fork lift trucks based on the principle of hydrostatics, is available in a 12-page booklet No. SP-24. available from Towmotor Corp. 1226 E. 152nd St., Cleveland 10, Ohio. The booklet, which explains the unit's operational features, also illustrates and describes its chief components—including hydraulic pumps, valves and motors.

For more details circle No. 429 on enclosed return postal card.

Combustion Indicator, Recorder

Because the maintenance of proper ratio of air and fuel is of constant concern to design, plant and operating engineers, ESS Instrument Co., Bergenfield, N. J., has released Bulletin 802 as a reference to fuel savings through increased combustion efficiency. This reference contains schematic diagrams of installations and relay circuits. The bulletin describes the ESS Hazegage Combustion Indicator and outlines operating techniques incorporated into this photoelectric unit.

For more details circle No. 430 on enclosed return postal card.

Wood Preservative Paint

Bulletin W-9 describes a wood preservative paint offered under the trade name, WOOD-REM. This paint reputedly provides maximum resistance to rot and decay. It is said to be especially adapted for wood in the ground, on the earth's surface or subjected to continuous moisture. The paint is recommended for wood vats, tanks, troughs, fence posts, piers, railway ties, foundation timbers, poles, window frames, decks, etc. Speco, Inc., 7308 Associate Ave., Cleveland 9, Ohio.

For more details circle No. 431 on enclosed return postal card.

Heavy-Duty Hoists

Robbins & Myers, Inc., Hoist and Crane Div., Springfield, Ohio, has published a 12-page bulletin 920, describing a line of Type F, low-headroom electric hoists. Included are construction details, mounting option information, performance data and dimensions. Type F hoists are available in four frame sizes with capacities ranging from ⅛ to 10 tons. Mounting options include lug suspension, plain, hand-geared, motorized and fluid drive trolleys.

For more details circle No. 432 on enclosed return postal card.

Fire Control Charts

A two-color wall chart (18 by 24 in.), which explains the three classes of fires and approved portable extinguishers to be used on each, has been prepared by Walter Kidde & Co., Inc., Main St., Belleville, N. J. The chart shows wet extinguishing agents such as water, anti-freeze or soda-acid are suitable only for Class A fires in ordinary combustibles (wood, paper, etc.). The chart groups Class B fires, which occur in flammable liquids (gas, oil, paint, etc.), and Class C fires, which occur in electrical equipment.

For more details circle No. 433 on enclosed return postal card.

Longer Concrete Floor Life

How Masterplate "iron clad" concrete floors last six times longer than ordinary concrete floors is explained in this 24-page

Master Builders Company bulletin MP-4d. Discussed are the major features sought in the design of any industrial floor subject to heavy use, i. e., wear and corrosion resistance; economy, spark resistance, static-dissemination, color, and non-slip, non-dusting, easy-to-clean surfaces. The Master Builders Co., Cleveland 3, Ohio.

For more details circle No. 434 on enclosed return postal card.

Condulets for Corrosive Locations

"Condulets for Corrosive Locations" is a 16-page bulletin by Crouse-Hinds Co., Syracuse 1, N. Y. Corrosion-resistant properties of various metals and finishes used in Crouse-Hinds Condulets are described, with simple charts showing applications. The booklet also contains first formal listings of Plast-A-Cont Condulets for hazardous and non-hazardous locations.

For more details circle No. 435 on enclosed return postal card.

Composite Product Bulletin

Bulletin No. 518 illustrates and describes a line of air filtration, process dust control, air conditioning, heating, ventilating, heating specialties and controls for industry. American Air Filter Co., Inc., Dept. PD, 215 Central Ave., Louisville 8, Ky.

For more details circle No. 436 on enclosed return postal card.

Fire Barriers by Overly

"Fire Barriers by Overly," a 16mm color and sound motion picture, has been released by the Overly Mfg. Co., Greensburg, Pa. The 6-minute film shows fire test conducted at Underwriters' Laboratories in Chicago on a fire barrier made by Overly of metal and glass doors and frames. The unit withstood the test and received an Underwriters' Laboratory "C" label, which means the frames will withstand fire and smoke for 45 minutes. The film tells how these units can be placed as smoke and fire screens in the corridors of hospitals, schools, hotels, and other buildings, providing refuge in the building. People can be moved quickly into this area, then be evacuated in a more orderly manner. The film is free.

For more details circle No. 437 on enclosed return postal card.

Fork Trucks

The Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, Ohio, has made available a condensed catalog, which illustrates and describes the company's line of fork trucks. The 12-page literature classifies truck types under six categories: fork trucks, with capacities to 10,000 lbs.; heavy-duty fork and ram trucks, with capacities from 12,000 to 80,000 lbs.; low lift platform trucks, with capacities from 4,000 to 80,000 lbs.; high list platform trucks, with the same range of capacities; die handling trucks, with capacities to 80,000 lbs.; and mobile cranes. Specifications for all models, plus photographs of various model types, are included.

For more details circle No. 438 on enclosed return postal card.

Fire-Resistant Fluids

The Shell Oil Co., Industrial Products Dept., 50 W. 50th St., New York 22, has available a booklet of 17-pages: *Shell Synthetic Fire-Resistant Fluids*. The booklet describes Shell Synthetic Fire-Resistant Fluids "B" and "C". Discussed are safety factors, applications and operating factors of the fire resistant fluids.

For more details circle No. 439 on enclosed return postal card.

Safety Containers

This catalog lists the company's line of safety containers for storage of flammable liquids. Specifications are included. Protectoseal Co., 1928 S. Western Ave., Chicago 8, Ill.

For more details circle No. 440 on enclosed return postal card.

Precision Switches

Revised 24-page catalog No. 101d covers the line of snap-action and mecury switches made by MICRO SWITCH, a Div. of Minneapolis-Honeywell Regulator Co., Freeport, Ill. Included is data on high-temperature, maintained-contact, explosionproof, high-capacity, proximity, oil-tight, environment-free and multicircuit types. The catalog has photos, dimensions, electrical ratings, characteristics and application information.

For more details circle No. 441 on enclosed return postal card.

Slurry Rock Dust Distributor

M-S-A Model 80 Slurry Rock Dust Distributor for machine mounting is the subject of Bulletin No. 1201-6 prepared for the mining industry by Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa. Dimensional data lists tank capacity, discharge rate and operating time for a complete cycle (one batch) of rock dust mix. Details of a typical application and catalog numbers for unit parts are also included.

For more details circle No. 442 on enclosed return postal card.

Pressure Sensitive Special Markers

A 12-page catalog describes 20 pressure-sensitive materials used for marking, labeling, sealing, holding products and components made in industry. The catalog illustrates case histories of made-to-order special markers. It includes serial numbering, logos, trademark reproduction for temporary or permanent identification. Examples of Brady Markers for identification, instruction, inspection and information are shown. Technical and engineering application information on tapes is charted. W. H. Brady Co., 727 W. Glendale Ave., Milwaukee 9, Wis.

For more details circle No. 443 on enclosed return postal card.

Liquid Level and Flow Control

How to provide operating and safety controls for jobs involving liquid level and liquid flow is contained in Bulletin ERS-A, published by McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18. Typical applications range from water supply to proportioning systems; from stand-by pumps to unit ventilators; from hydropneumatic tanks to water chillers. There are 21 case studies. Engineering information is given for each job, with schematic drawings to show typical hook-ups. Electric wiring diagrams are often given.

For more details circle No. 444 on enclosed return postal card.

A Guide to Fire Extinguishers

A 6-page folder, *A Guide to Fire Extinguishers*, contains a table which compares characteristics of various types of fire extinguishers. A bar graph on the last page shows the comparative effectiveness of extinguishing agents, according to Underwriters' Laboratories ratings. Cut-away drawings of an Ansul dry chemical extinguisher and an Ansul stored pressure water extinguisher are presented. Fire Equipment Div., Ansul Chemical Co., Marinette, Wis.

For more details circle No. 445 on enclosed return postal card.

Welding Wire

This 6-page folder on Page Submerged Arc and Inert Gas Welding Wires, designated as Bulletin DH-402-C, has been expanded and revised. For users of welding wire, it has been made available by the Page Steel and Wire Div., American Chain and Cable Co., Inc., Monessen, Pa. Featured is a description of uses of 26 analyses of stainless steel, low alloy, and mild carbon steel automatic welding wires. The folder describes Page methods of packaging welding wires, such as in fibre drums, corrugated cartons, paper-wrapped coils, standard spools, and Payoffpaks.

For more details circle No. 446 on enclosed return postal card.

Floor Maintenance Products

Bulletin No. A-1295 describes Moratred, used for resurfacing and patching new or old concrete, wood or steel floors. This product provides non-skid surfaces on ramps, stairs, etc. Chemical and solvent resistant qualities offer protection against damaging effects of alkalies, acids, salt solutions, carbon tetrachloride, oils, greases and many other petroleum solvents. Bulletin No. A-5095 describes another product, Moraset. This is a liquid material specially formulated for filling and sealing cracks, small holes, spalled and etched areas, etc., in concrete, terrazzo, ceramic and quarry tile floors and walls, indoors and out. Moraset may be used for overall surfacing. Abrasive may be added for a non-slip surface. Cracks filled and sealed with Moraset eliminate mold and bacteria-harboring areas in such industries as food and drug, brewing, explosive, etc. Moraset is also said to be ideal for repairing swimming pools and other similar reservoirs. Rock-Tred Corp., 7442 N. St. Louis Ave., Skokie, Ill.

For more details circle No. 447 on enclosed return postal card.

Prevents Slipping Accidents

FERROX non-slip plastic composition for covering plant floors is described in a bulletin issued by American Abrasive Metals Co. Methods and places of applications are outlined. Pictures show typical uses. American Abrasive Metals Co., 464 Coit St., Irvington, 11, N. J.

For more details circle No. 448 on enclosed return postal card.

Noise Simplified

Noise Simplified is an 18-page booklet issued by Herman Hosmer Scott, Inc., 111 Powder Mill Road, Maynard, Mass. Technical information of sound measurement, the relation of noise to hearing and methods for controlling noise is provided.

For more details circle No. 449 on enclosed return postal card.

Lock-Out

Safety for maintenance personnel is provided with Lock-Out, made by Osborn Mfg. Co., Warsaw, Ind., and described in the firm's pocket-sized bulletin. Information is available on how the safety device can be used by six different persons in shutting off switches; fuse boxes; and gas, acid, and steam valves.

For more details circle No. 450 on enclosed return postal card.

Fire-Retardant Coatings

The Royston Laboratories, Inc., Blawnox, Pittsburgh 38, Pa., has made available a four-page brochure on Roskote Fire-Retardant Coatings for Thermal Insulation Materials. Application and coverage data are provided in the bulletin.

For more details circle No. 451 on enclosed return postal card.

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Circle Item No. 92—Reader Service Card

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East of Mississippi: CTL COMPANY 1710 W. Stewart Ave Wausau, Wisconsin

Circle Item No. 93—Reader Service Card

MY JOB is to make certain that the safety equipment our company buys is the finest available. Before I buy any safety product, I carefully examine its design features, the quality of materials used, and the practical on-the-job advantages it offers. CESCO head and eye protective equipment constantly earns top position on our approved list because of the overall excellence that their products provide on these counts. Take this new CESCO Helmet Type Face Shield, for example. Made of translucent fiber glass, it has a replaceable plastic window mounted on a molded rubber gasket for greater resistance to impact. In addition, it offers a new detachable headgear which is adjustable three ways to fit any head size. It's features like these that make an investment in CESCO safety equipment last longer, give greater user comfort, and most important—provide positive protection against the hazard for which it is designed.

I urge you to see the many new safety equipment developments that your CESCO distributor is offering right now! He's also a safety specialist who will give you expert advice on any safety equipment problem. What's more, he will back up his recommendations with prompt delivery of the items you order —in most cases, from the complete line of CESCO products he carries in stock.

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BATON ROUGE, LA.
Guardian Safety Equipment Co.
3616 Capitol Heights Ave.

BIRMINGHAM, ALABAMA
Safety Supplies & Service Co.
1640 Montclair Road

BOSTON, MASS.
General Equipment Corporation
261 Franklin Street

BUFFALO, N. Y.
The Watson Company
1362 Kenmore Avenue

CHICAGO, ILLINOIS
Universal Safety Equipment Co.
6115 West Diversey Avenue

CINCINNATI, OHIO
Williams & Co., Inc.
3251 Fredonia Avenue

CLEARWATER, FLORIDA
Car-Mad Equipment Company
686 Palm Avenue, Belleair

CLEVELAND, OHIO
Williams & Co., Inc.
3700 Perkins Avenue

COLUMBUS, OHIO
Williams & Co., Inc.
980 Williams Avenue

DALLAS, TEXAS
Guardian Safety Equipment Co.
3107 Commerce Street

DENVER, COLORADO
Gould Rubber Co.
1833 Santa Fe Drive

DETROIT, MICH.
Averill Equipment Company
18225 Consent Avenue

HOUSTON, TEXAS
Guardian Safety Equipment Co.
200 Sandman Street

KANSAS CITY, MO.
Safety, Inc.
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KNOXVILLE, TENN.
Safety Equipment Distributing Co.
432 W. Main Street

LOS ANGELES, CALIF.
Guardian Safety Equipment Co.
7323 South Main Street

LOUISVILLE, KENTUCKY
Williams & Co., Inc.
1109 South Preston Street

MILWAUKEE, WIS.
Universal Safety Equipment Co.
3255 South Seventh Street

NEW YORK, N. Y.
(See ORANGE, N. J.)

ORANGE, N. J.
Guardian Safety Equipment Co.
400 South Jefferson Street
(New York-New Jersey Area)

PEORIA, ILLINOIS
Standard Industrial Products Co.
3527 W. Farmington Road

PHILADELPHIA, PA.
Guardian Safety Equipment Co.
214 South 45th Street

PITTSBURGH, PA.
Williams & Co., Inc.
981 Pennsylvania Avenue

ST. LOUIS, MO.
Safety, Inc.
3008 Olive Street

ST. PAUL, MINN.
Continental Safety Equipment, Inc.
1861 Selby Avenue

SALT LAKE CITY, UTAH
Universal Safety & Fire Equipment Co.,
727 South West Temple

SAN MATEO, CALIF.
Guardian Safety Equipment Co.
229 East Third Avenue

TOLEDO, OHIO
Williams & Co., Inc.
946 Kane Street

TUCSON, ARIZONA
Grinnell Fire Fighting Equipment Co.
2521 N. Stone Avenue

TULSA, OKLA.
Guardian Safety Equipment Co.
1742 South Main Street

MEXICO CITY, D. F.
Safety Equipment, S. A.
Bosco Morena, 1528

EDMONTON, CANADA
Soper-Singleton Electric Co.
10831 101st Street

MONTREAL, CANADA
The Butler Optical Company, Ltd.
1509 Mountain Street

WINNIPEG, CANADA
MacKay-Morton Limited
183 James Street East

CESCO

Circle Item No. IBC—Reader Service Card

It's 148°F to 180°F in this Kiln! Yet AO Head-to-Foot Protection Permits Worker to take Searing Kiln Heat — and Do His Job!

Thanks to American Optical's new Thermalair Respirator and Aluminized Clothing, this man can now do a productive job in temperatures which formerly would have felled him. Application above is a kiln which man enters 4 or 5 times a day for about ten minutes to check moisture content of lumber. The safety director commented: "We tried going in without the respirator and couldn't get past the door."

The AO Thermalair Respirator (the only one of its kind) protects against heat *up to 300°F.* It was developed for use in ovens, kilns, furnaces and dryers when workers must enter these areas for product control, repairs and maintenance. *Here's how the respirator works:* Using the heat exchanger principle, as wearer inhales, heat is removed from incoming air and temporarily stored in the cartridge (not in wearer's respiratory passages). As wearer exhales, the stored heat is expelled from cartridge to the outside air. QUICK FACTS: A great health, time and money saver . . . permits freedom of work movement (no bulky equipment) . . . protects in sub-freezing as well as excessively hot atmospheres.

AO Aluminized Clothing does the rest of the heat protection job — and does it comfortably. The material reflects 90% of radiant heat — and weighs only 50% as much as regular asbestos. It also has superior abrasion resistance to plain asbestos (or duck) with longer safe life. AO Aluminized Clothing is available in a complete line of clothing and gloves including jackets, coats, pants, chaps, aprons, spats, leggings, overalls and hoods.

NOTE: The Hood and Aluminized Window on wearer in photo were developed by AO especially.

Always insist on Ⓐ Trademarked Safety Products

American Optical
COMPANY
SAFETY PRODUCTS DIVISION
SOUTHBRIDGE, MASSACHUSETTS
Safety Service Centers in Principal Cities

Your Nearest AO Safety Products Representative can Supply You.

Circle Item No. 8C—Reader Service Card